



PDT 8000 Series



Product Reference Guide

PDT 8000 Series
Product Reference Guide

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Revision A

October 2002

symbol®

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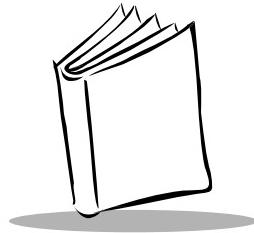
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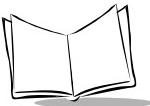
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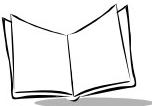
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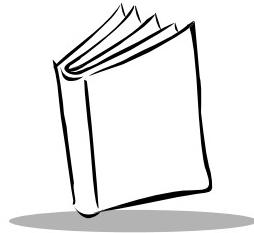
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Introduction

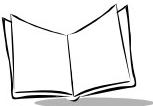
The *PDT 8000 Series Product Reference Guide* provides information about the PDT 8000 Series terminal using the Pocket PC 2002 Operating System, and its accessories. The PDT 8000 Series includes the following variations of the terminal:

- PDT 8000: batch
- PDT 804x: Spectrum24 LAN radio

Chapter Descriptions

Topics covered in this guide are as follows:

- *Chapter 1, Getting Started* explains the physical buttons and controls on your terminal, how to install and charge the batteries, replace the handstrap, and start your terminal for the first time.
- *Chapter 2, Operating the Terminal* explains how to use your terminal, including instructions for powering on and resetting the terminal, using the stylus and a headset, entering information, and scanning.
- *Chapter 3, Customizing Your Terminal* explains how to adjust settings on the terminal, and add and delete programs.
- *Chapter 4, Communications* explains how to use Microsoft® ActiveSync™ for communications between the terminal and host computer.
- *Chapter 5, Applications* describes how to use the Calendar, Contacts, Tasks, Notes and Inbox applications.
- *Chapter 6, Companion Programs* describes how to use Pocket Word, Pocket Excel, MSN Messenger, MS Media Player, and Microsoft Reader.



- Chapter 7, *Pocket Internet Explorer* explains how to set up favorite links and channels, and browse the web on your terminal.
- Chapter 8, *Connections* describes how to connect the terminal to your e-mail server, and transfer information via infrared.
- Chapter 9, *Spectrum24 Network Configuration* describes how to configure the Spectrum24 wireless connection.
- Chapter 10, *Software Installation on Development PC* provides instructions for installing the Software Developer's Kit on your host computer.
- Chapter 11, *Configuring the Terminal* describes how to install and use the Terminal Configuration Manager (TCM) and Initial Program Loader (IPL).
- Chapter 12, *Maintenance and Troubleshooting* provides information to help you take proper care of your terminal and solve problems that may come up.
- Appendix A, *Block Recognizer Characters* details how to write letters on your terminal using the Block Recognizer so they are correctly translated into text.
- Appendix B, *Demo Program* provides an overview of the PDT 8000 demo program applications, such as scanning, setup, diagnostic utilities, and file management.
- Appendix C, *Technical Specifications* includes a table listing the technical specifications for the terminal.
- Appendix D, *Keyboard Maps* includes tables listing key functionality for the keyboard.

Notational Conventions

This document uses these conventions:

- “terminal” or “PDT 8000” refers to any model of the terminal.
- “User” refers to anyone using an application on the terminal.
- “You” refers to the End User, System Administrator or Technical Support person using this manual as a reference to install, configure, operate, maintain and troubleshoot the terminal.
- *Italics* are used to highlight specific items in the general text, and to identify chapters and sections in this and related documents. It also identifies names of screens, menus, menu items, and fields within screens.
- Courier text identifies buttons to be tapped or clicked on screens.
- Bullets (•) indicate:
 - lists of alternatives or action items.

- lists of required steps that are not necessarily sequential.
- Numbered lists indicate a set of sequential steps, i.e., those that describe step-by-step procedures.

Related Documents

The following documents provide more information on your terminal.

- *PDT 8000 Quick Reference Guide*, p/n 72-58168-xx
- *MDM 8000 Snap-on-Modem Quick Reference Guide*, p/n 72-55730-xx
- *VCA 8000-01 Snap-on-Autocharger Quick Reference Guide*, p/n 72-57868-xx
- *CRD 8000-1000S Serial Cradle Quick Reference Guide*, p/n 72-58170-xx
- *CRD 8000-1000M Modem Cradle Quick Reference Guide*, p/n 72-58171-xx
- *CHS 8000-4000C/B Charging Cradle Quick Reference Guide*, p/n 72-58172-xx
- *UBC 2000 Universal Battery Charge Product Guide*, p/n 70-33188-xx
- *Windows CE Help File for Symbol Terminals*, p/n 72E-38880-xx.
- *Symbol Software Developer's Kit (SDK) for the Pocket PC*,
available at <http://Software.Symbol.com/DevZone>.

Service Information

If you have a problem with your equipment, contact the *Symbol Support Center* for your region. See [page xiv](#) for contact information. Before calling, have the model number, serial number, and several of your bar code symbols at hand.

Call the Support Center from a phone near the scanning equipment so that the service person can try to talk you through your problem. If the equipment is found to be working properly and the problem is symbol readability, the Support Center will request samples of your bar codes for analysis at our plant.

If your problem cannot be solved over the phone, you may need to return your equipment for servicing. If that is necessary, you will be given specific directions.

Note: *Symbol Technologies is not responsible for any damages incurred during shipment if the approved shipping container is not used. Shipping the units improperly can possibly void the warranty. If the*



original shipping container was not kept, contact Symbol to have another sent to you.

Symbol Support Center

For service information, warranty information or technical assistance contact or call the Symbol Support Center in:

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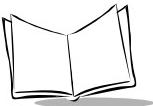
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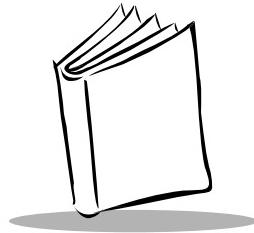
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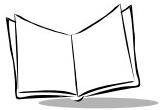


Chapter 1

Getting Started

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PDT 8000 Series Product Reference Guide

Introduction

This chapter explains the physical buttons and controls on your terminal, how to install and charge the batteries, replace the handstrap, and start your terminal for the first time.

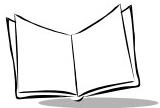
Unpacking the Terminal

Carefully remove all protective material from around the terminal and save the shipping container for later storage and shipping.

Verify that you received all equipment listed below:

- a terminal
- a handstrap, attached to the terminal
- a stylus
- a *Quick Reference Guide* for the terminal.

Inspect the equipment for damage. If you are missing any equipment or if you find any damaged equipment, contact the Symbol Technologies Support Center immediately. See [page xiii](#) for contact information.



Parts of the Terminal

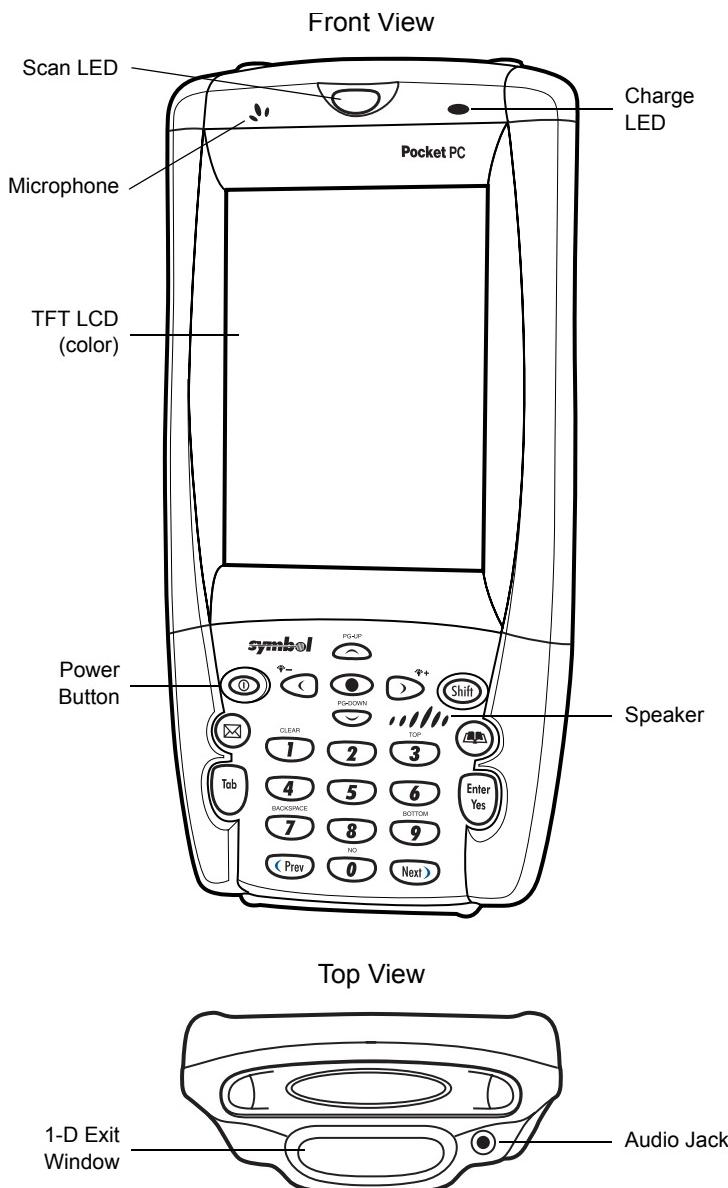


Figure 1-1. Front & Top Views

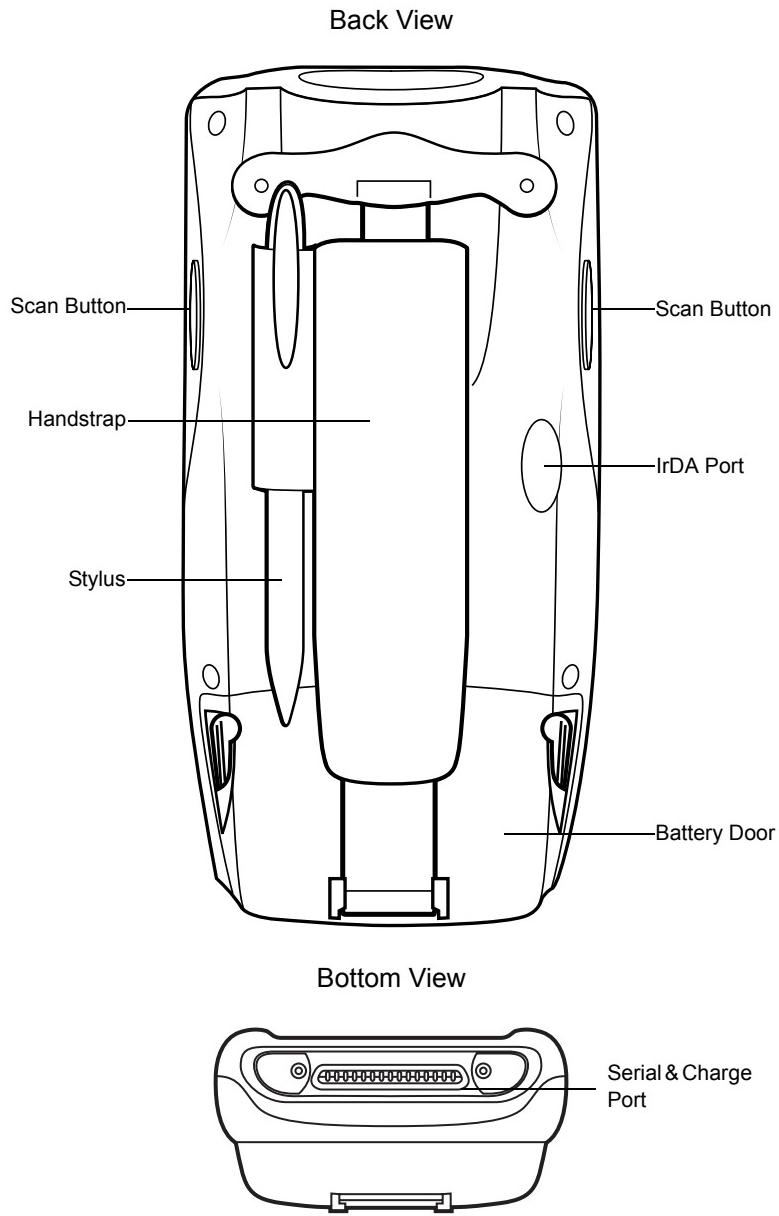
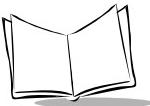


Figure 1-2. Back & Bottom Views



Accessories

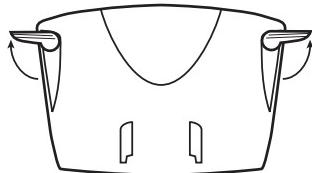
- **Additional lithium-ion Battery** (p/n 21-54882-01)
- **Style** (p/n 11-55475-05): for performing pen functions
- **Cables:**
 - **Snap-On DEX Cable** (p/n CBL-8000-100-DEX): connects the terminal to a vending machine.
 - **Snap-On Autocharger** (p/n VCA8000-01): connects to the cigarette lighter in a vehicle to charge the terminal.
 - **Snap-On Printer Cable** (p/n CBL-8000-100-INT1): adds printing capabilities to the terminal.
 - **AC Wall Adapter**: (p/n CBL8000-100U, CBL8000-400U): charges the terminal.
 - **Serial Charging Cable** (p/n 25-55853-01): allows serial connection of the terminal to a host computer.
- **Snap-On Modem Module** (p/n MDM8000-xxx): allows dial-up connections of the terminal to a remote host computer, while maintaining the portability of the terminal.
- **Single-Slot Serial Cradle** (p/n CRD8000-1000S): charges the terminal and synchronizes the terminal with a host computer through a serial connection.
- **Single-Slot Modem Cradle** (p/n CRD8000-1000M): charges the terminal and synchronizes the terminal with a host computer through a modem connection.
- **Four-Slot Charging Cradle** (p/n CHS8000-4000C): charges the terminal.
- **Four-Slot Charging Cradle with Spare Battery** (p/n CHS8000-4000B): charges the terminal and a spare battery.
- **UBC Adapter and Base** (p/n 21-32665-33 and UBC2000-xxxxx): charges up to four spare batteries.
- **Holster** (p/n 11-57530-02): stores the terminal when not in use.
- **Symbol Software Developer's Kit (SDK)** for the PDT 8000 Pocket PC 2002.

Installing Batteries

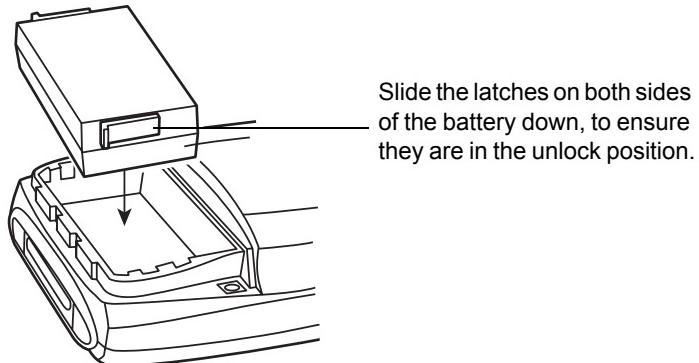
Before using your terminal, install the lithium-ion battery. The battery fits behind the battery door on the back of the terminal.

To install the battery:

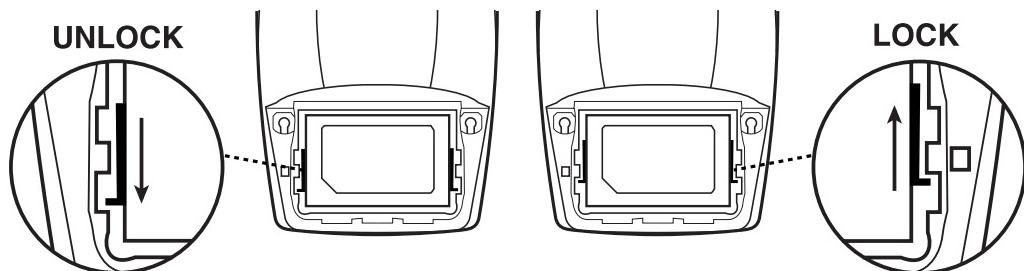
1. Rotate the latches on the battery door up and lift the battery door away from the terminal.

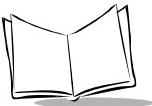


2. Insert the lithium-ion battery into the battery compartment.



3. Lock the battery in place by sliding the latches on the battery up.





4. Replace the battery door, hooking it onto the bottom of the compartment and then pressing down firmly along the top edge while rotating the latches on the battery door down into the locked position.

Note: Ensure that the latches on the battery door are in the up position while securing the battery door on the terminal.

Caution

Do not expose the battery to temperatures in excess of 140°F (60°C). Do not disassemble, incinerate, or short circuit the battery.

Charging the Terminal Battery

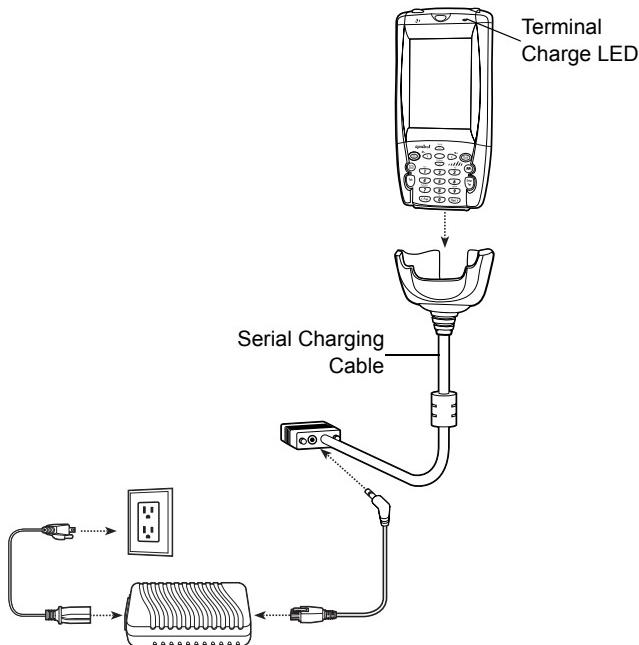
Before using your terminal for the first time, charge the lithium-ion battery in the terminal for approximately four hours, using the Serial Charging Cable or an appropriate accessory.

Your terminal is equipped with a memory backup battery which automatically charges from the fully-charged lithium-ion battery. This backup battery retains data in memory when the terminal's battery is removed, and can take up to 20 hours to charge when you first use your terminal.

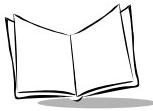
Note: If you remove your lithium-ion battery before the backup battery is fully charged, data may be lost. For this reason, DO NOT remove the battery before the backup battery is fully charged, which can take up to 20 hours.

Using the Serial Charging Cable

To charge the terminal's battery using the Serial Charging Cable, setup as shown below:

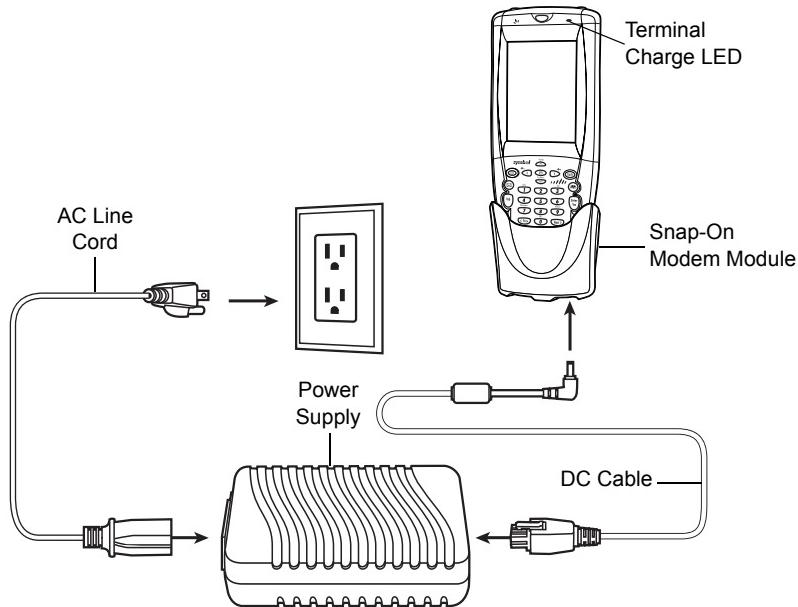


The terminal charge LED blinks amber to indicate that the terminal battery is charging and turns solid amber when charging is complete. The battery usually charges in two hours or less, but may take up to four hours to fully charge. See [Charge LED Indicator](#) on page 1-16 for other indications.



Using the Snap-On Modem Module

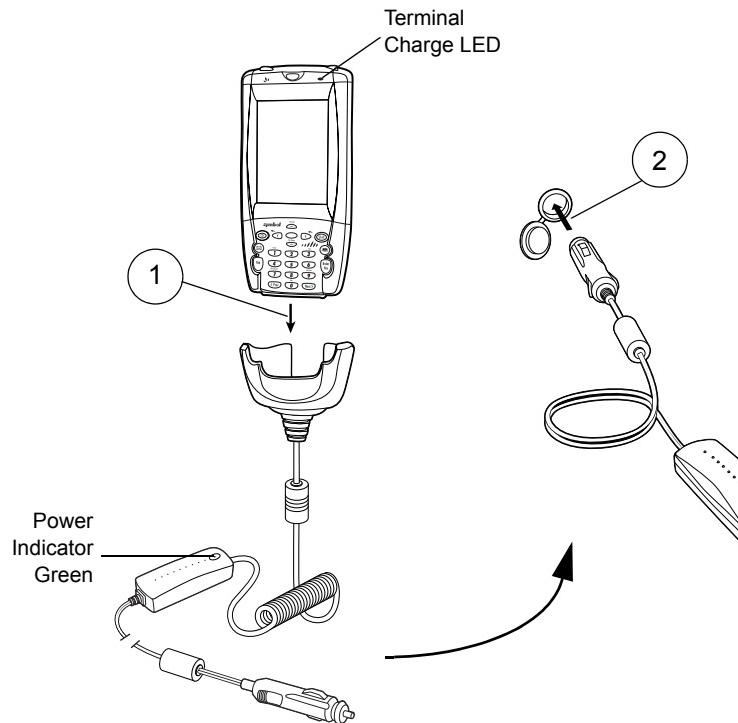
To charge the terminal's battery using the Snap-On Modem Module, setup as shown below:



The terminal charge LED blinks amber to indicate that the terminal battery is charging and turns solid amber when charging is complete. The battery usually charges in two hours or less, but may take up to four hours to fully charge. See [Charge LED Indicator](#) on page 1-16 for other indications.

Using the Snap-On Autocharger

To charge the terminal's battery using the Snap-On Autocharger, setup as shown below:



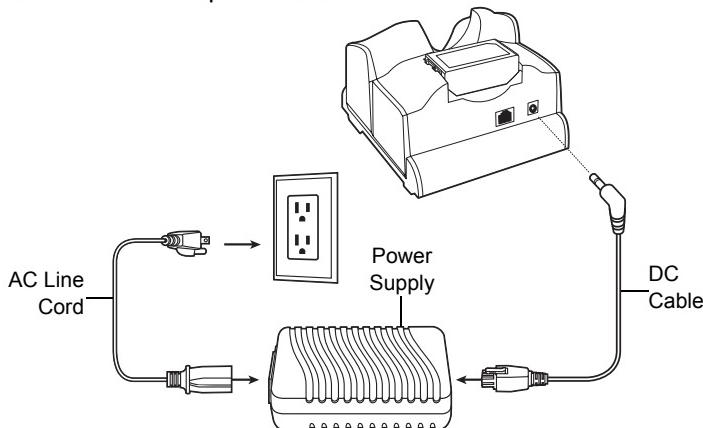
The terminal charge LED blinks amber to indicate that the terminal battery is charging and turns solid amber when charging is complete. The battery usually charges in two hours or less, but may take up to four hours to fully charge. See *Charge LED Indicator* on page 1-16 for other indications.



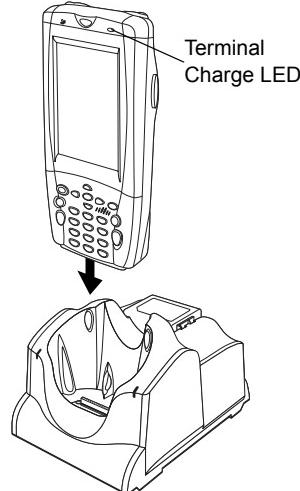
Using the Single-Slot Cradle

To charge the terminal's battery using the CRD8000-1000S or the CRD8000-1000M:

1. Connect the cradle to a power source.



2. Insert the terminal into the cradle. The terminal starts to charge automatically.

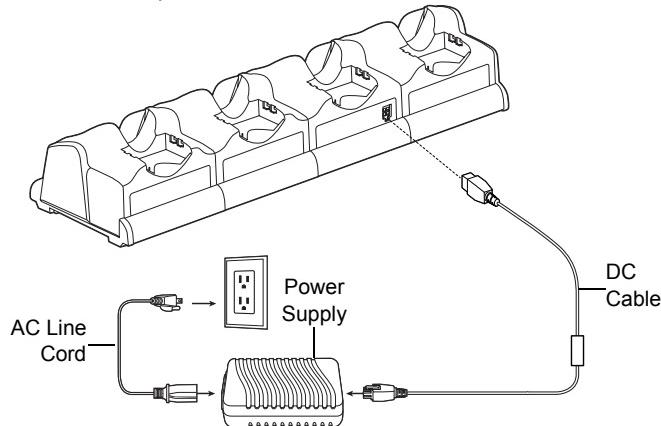


The terminal charge LED blinks amber to indicate that the terminal battery is charging and turns solid amber when charging is complete. The battery usually charges in two hours or less, but may take up to four hours to fully charge. See [Charge LED Indicator](#) on page 1-16 for other indications.

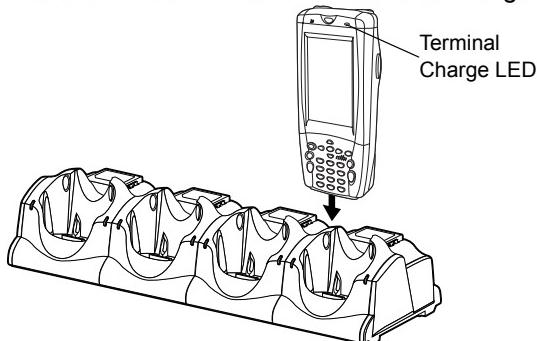
Using the Four-Slot Cradle

To charge the terminal's battery using the CHS8000-4000C or the CHS8000-4000B:

1. Connect the cradle to a power source.



2. Insert the terminal into the cradle. The terminal starts to charge automatically.



The terminal charge LED blinks amber to indicate that the terminal battery is charging and turns solid amber when charging is complete. The battery usually charges in two hours or less, but may take up to four hours to fully charge. See [Charge LED Indicator](#) on page 1-16 for other indications.



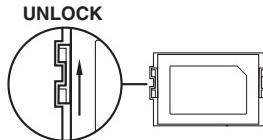
Charging Spare Batteries

A spare battery can be charged using either of the single-slot cradles (CRD8000-1000S or CRD8000-1000M) or the CHS8000-4000B.

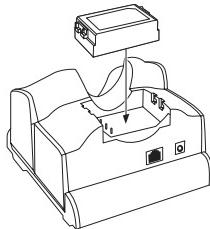
Note: You can also use a UBC Adaptor (p/n 21-32665-33) to charge spare batteries. Refer to the UBC 2000 Universal Battery Charge Product Guide for more information.

Using the Single-Slot Cradle

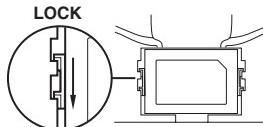
1. Connect the cradle to a power source.
2. Slide the latches on both sides of the battery up, to ensure they are in the unlock position.



3. Insert the battery into the Spare Battery Charging slot on the back of the cradle. Position it with the charging contacts facing down (over charging pins) and gently press down on the battery to ensure proper contact.



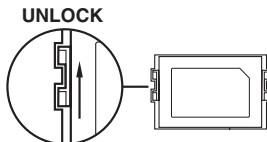
4. Lock the battery into place by sliding the latches on the battery down.



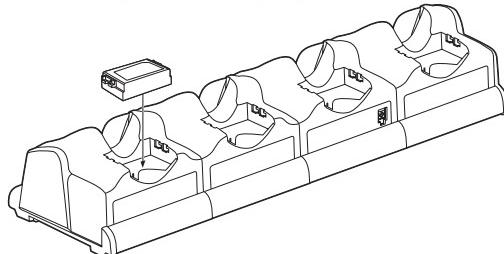
The spare battery charging LED blinks amber to indicate that the battery is charging and turns solid amber when battery is completely charged. The battery usually charges in two hours or less, but may take up to four hours to fully charge. See [Charge LED Indicator](#) on page 1-16 for other indications.

Using the CHS8000-4000B

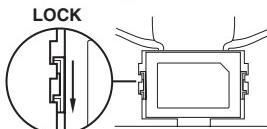
1. Connect the cradle to a power source.
2. Slide the latches on both sides of the battery up, to ensure they are in the unlock position.



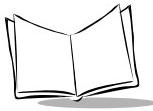
3. Insert the battery into the Spare Battery Charging slot on the back of the cradle. Position it with the charging contacts facing down (over charging pins) and gently press down on the battery to ensure proper contact.



4. Lock the battery into place by sliding the latches on the battery down.



The spare battery charging LED blinks amber to indicate that the battery is charging and turns solid amber when battery is completely charged. The battery usually charges in two hours or less, but may take up to four hours to fully charge. See [Charge LED Indicator](#) on page 1-16 for other indications.



Charge LED Indicator

Table 1-1. Charge LED Indicator

LED	Indication
Terminal Charging (LED is on terminal)	
Off	Terminal not in cradle; terminal not placed correctly; cradle is not powered
Slow blinking amber	Terminal is charging.
Fast blinking amber	Error in charging; check placement of terminal.
Solid amber	Charging is complete.
Spare Battery Charging (LED is on Cradle)	
Off	No spare battery in slot; spare battery not placed correctly; cradle is not powered.
Slow blinking amber	Spare battery is charging.
Fast blinking amber	Error in charging; check placement of spare battery.
Solid amber	Charging is complete.

Checking Battery Power

To check whether the main battery or backup battery in the terminal is charged, tap *Start - Settings - System - Power* to display the following Battery Status screen.

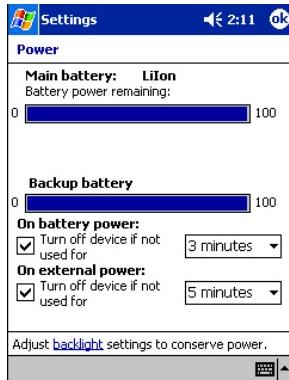
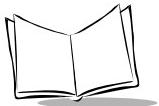


Figure 1-1. Battery Status Screen

To save battery power, set your terminal to turn off after a specified number of minutes on battery power.

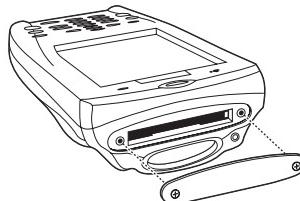


Inserting a Compact Flash Storage Card

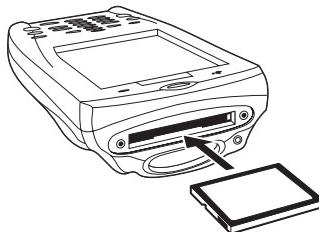
The PDT 8000 has a slot for a compact flash storage card which includes a compartment door that prevents the card from coming out if the PDT 8000 is dropped.

To insert a compact flash card:

1. Unscrew and remove the compact flash card compartment door on the top of the terminal.



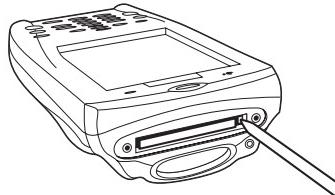
2. Insert a compact flash card into the compartment.



3. Screw the compartment door back on.

To remove a compact flash card:

1. Unscrew and remove the compact flash card compartment door on the top of the terminal.
2. Use the stylus to press the flash card release button inside the flash card compartment. The card pops out.

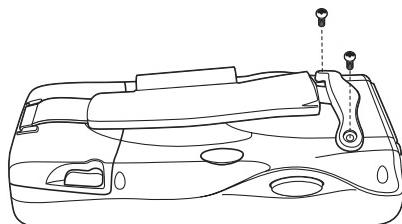


Replacing the Handstrap

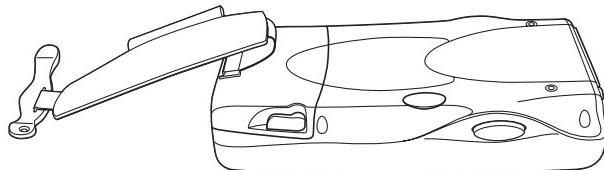
The terminal has a factory-installed handstrap which increases comfort when holding the terminal for extended periods of time. The handstrap may be removed or replaced, if damaged.

To remove the handstrap

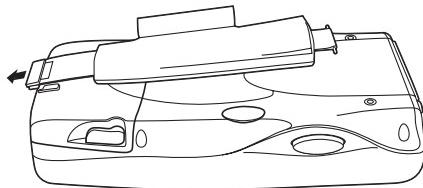
1. Unscrew the bar, on the top of the handstrap.

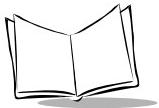


2. Remove the pin that connects the handstrap to the bar.



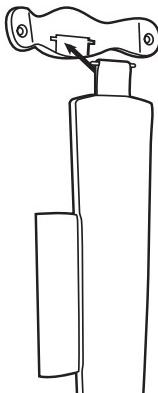
3. Unhook the bottom of the handstrap from it's slot on the battery cover.



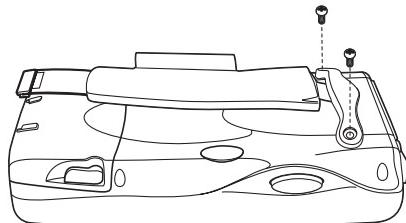


To replace the handstrap:

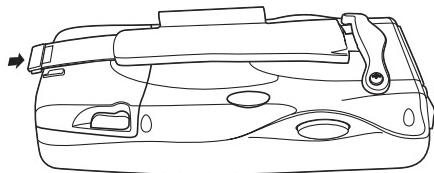
1. Insert the pin of the handstrap into the bar.



2. Screw the bar onto the terminal.



3. Hook the bottom of the handstrap onto the battery cover.



Starting the Terminal

After installing and charging the battery, start the terminal by pressing the red power button (see [Figure 1-2](#)). If the terminal does not power on, reset it. See [Resetting Your Terminal](#) on page 2-23.

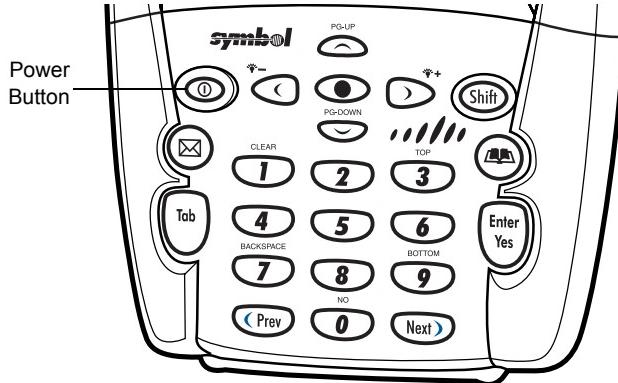


Figure 1-2. Power Button

As the terminal initializes its unique Flash File System, the Symbol splash screen displays for about 10 seconds. When the Welcome screen appears, tap anywhere on the screen to continue to the Align screen. Note that these screens also appear every time you perform a hard reset.

Aligning the Screen

To align your terminal so the cursor on the touch screen aligns with the tip of your stylus:

1. If necessary, adjust the backlight on the terminal so the screen is readable. See [Adjusting the Backlight](#) on page 2-3.
2. Remove the stylus from its storage silo on the handstrap.



3. Tap the center of each target that appears on the screen with the tip of the stylus.

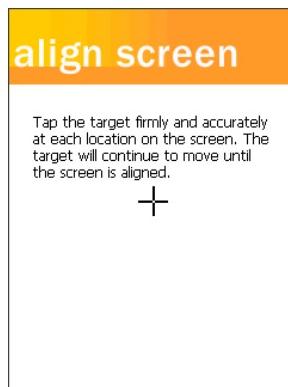


Figure 1-3. Tapping the Target

Note: To align the screen at anytime, press **Shift + 2** to launch the calibration screen.

4. Follow the directions on the screen which lead you through a simple exercise illustrating how to use the stylus and pop-up menus.

The first screenshot, titled 'stylus', shows a list of tasks: Buy stamps, Call Andy, Reschedule dental appointment, Write, Create Copy, Delete, and Select All. A stylus is shown pointing at the 'Create Copy' option, which is highlighted in a pop-up menu. Text below says: 'When you tap and hold an item with your stylus, a pop-up menu containing a list of actions appears.' A 'Next' button is at the bottom.

The second screenshot, titled 'pop-up menus', shows a calendar entry for 'Johnson's office appointment' on the 9th. A pop-up menu is open over the 9th, showing options: Cut, Copy, Paste, and Delete. An arrow points to the 'Cut' option. Text above says: 'Use pop-up menus to reschedule the following appointment: Tap and hold the 9 A.M. dental appointment, and then tap Cut on the pop-up menu.'

The third screenshot, also titled 'pop-up menus', shows a calendar entry for the 11th. A pop-up menu is open over the 11th, showing options: Cut, Copy, Paste, and Delete. An arrow points to the 'Cut' option. Text above says: 'Now tap and hold 11 A.M. and then tap Paste on the pop-up menu.'

Figure 1-4. Using Pop-up Menus

5. Use the drop-down menu to set your time zone, and tap Next.



Figure 1-5. Setting Time Zone on the Terminal

Note: These initial setup screens appear each time you perform a hard reset.

Setting Time and Date

The Time and Date screen does not appear after setting the time zone. Tap *Start - Settings - System - Clock* to use the clock control panel applet to set the time and date after a hard reset.

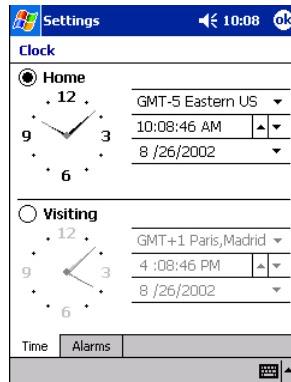
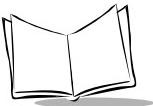


Figure 1-6. Setting Time and Date



Setting Up Your Terminal

Refer to the following chapters for setting up your terminal:

- For customizing the settings on your terminal, see [Chapter 3, Customizing Your Terminal](#).
- To set up ActiveSync to synchronize your terminal with your host computer, see [Chapter 4, Communications](#).
- To configure your terminal for Spectrum24, see [Chapter 9, Spectrum24 Network Configuration](#).
- To install development software on your development PC, see [Chapter 10, Software Installation on Development PC](#).
- To configure your terminal using the Terminal Configuration Manager, see [Chapter 11, Configuring the Terminal](#).

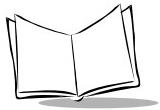


Chapter 2

Operating the Terminal

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PDT 8000 Series Product Reference Guide

Introduction

This chapter provides basic instructions for using and navigating your terminal.

Using the Power Button

Press the red power button on the top left-hand side of the terminal to turn it on and off. See [Starting the Terminal](#) on page 1-21.

Adjusting the Backlight

Use the key combinations below to decrease and increase the backlight.

Keys	Description
Shift + App Key 2 Shift + App Key 3	Turn backlight on or off.
Shift + Left Arrow	Decrease backlight (decrease brightness)
Shift + Right Arrow	Increase backlight (increase brightness)

Using a Headset

Your terminal is equipped with an audio connector. Therefore, a headset may be installed for telephony operation. To use the headset, plug the headset jack into the audio connector on the top of the terminal.

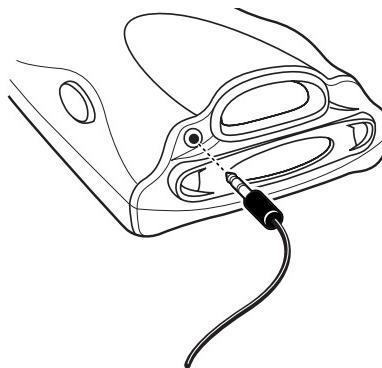


Figure 2-1. Using a Headset



Using the Keyboard

Refer to [Table 2-1 on page 2-5](#), for key functionality. Note that key functions can be changed by an application. Your keyboard may not function exactly as described in these tables.

Note: For detailed keyboard configurations including ASCII values and VK codes, see [Appendix D, Keyboard Maps](#).

For information about using the soft keyboard from the input panel, refer to [Using the Soft Keyboard](#) on page 2-13.

Terminal Keyboard

The keyboard uses a numeric keypad that produces the numbers (0-9) and assorted functions. The keyboard is color-coded to indicate particular actions that are produced when the modifier (**Shift**) key is pressed. The keyboard default is numeric, producing numbers.

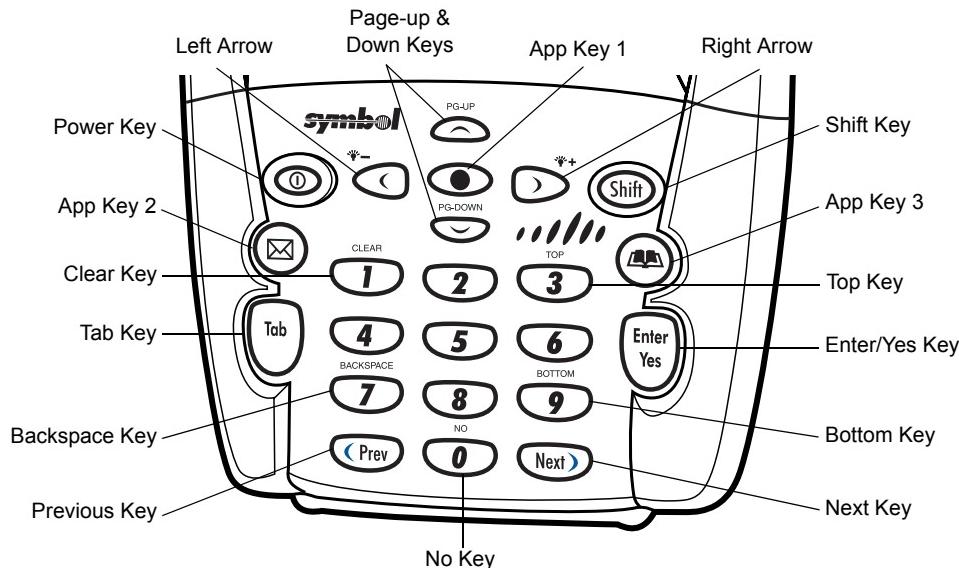
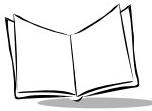


Figure 2-2. Terminal Keyboard

Table 2-1. Keyboard Actions

Key	Action
Backspace	Press Shift + 7 to erase information entered on the display, one character at a time.
Bottom	Press Shift + 9 . Action is application dependent.
Clear	Press Shift + 1 . Action is application dependent.
Enter/Yes	Press Enter after entering data or a command.
Left Arrow	See Adjusting the Backlight on page 2-3.
Next	Action is application dependent.
No	Press Shift + 0 . Action is application dependent.
Page-up and Down	Press Shift + Up Arrow . Action is application dependent. Press Shift + Down Arrow . Action is application dependent.
App Key 1	Launches application assigned to Button 1. See Assigning Applications to Application Buttons on page 3-7 for more information on assigning applications to buttons.
App Key 2	Press the App Key 2 to launch the Inbox application.
App Key 3	Launches application assigned to Button 3. See Assigning Applications to Application Buttons on page 3-7 for more information on assigning applications to buttons. Also see Adjusting the Backlight on page 2-3.
Power	Press Power to suspend/resume the terminal. See Starting the Terminal on page 1-21.
Previous	Action is application dependent.
Right Arrow	See Adjusting the Backlight on page 2-3.
Shift	Press the Shift key, then another key to produce the function above that key. See individual key descriptions in this table for additional Shift key usage.
Tab	Press Tab to move from field to field.
Top	Press Shift + 3 . Action is application dependent.



Using the Stylus

Your terminal has a stylus for selecting items and entering information. The stylus functions as a mouse.

- **Tap:** Touch the screen once with the stylus to open items and select options.
- **Drag:** Hold the stylus on the screen and drag across the screen to select text and images. Drag in a list to select multiple items.
- **Tap-and-hold:** Tap and hold the stylus on an item to see a list of actions available for that item. On the pop-up menu that appears, tap the action you want to perform.

Today Screen

When you turn on your terminal for the first time each day (or after four hours of inactivity), the Today screen appears. You can also display it by tapping *Start - Today*. On the Today screen, you can see important information for the day.

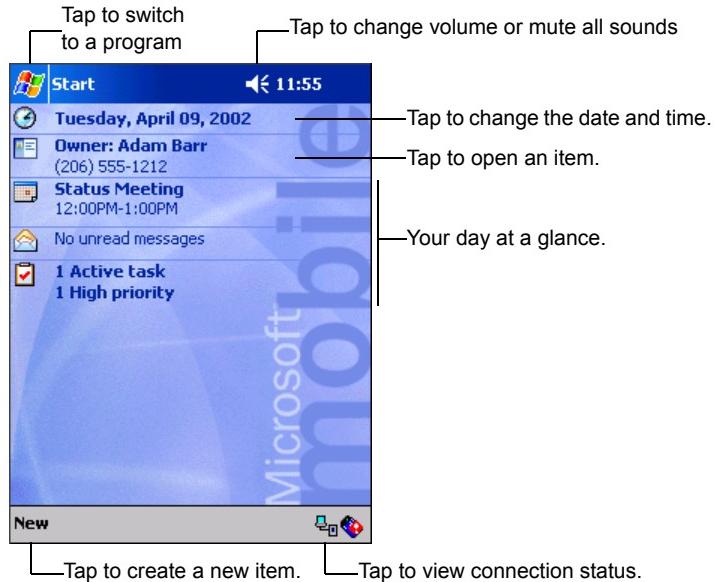


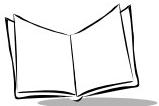
Figure 2-3. Today Screen

Status Icons

You may see the following status icons on the command bar located at the bottom of the screen:

Table 2-2. Status Icons

Icon	Meaning
	Turns all sounds on and off.
	Backup battery is low.
	Main batteries are charging.
	Main batteries are low.
	Main batteries are very low.
	Main batteries are full.
	Connection is active.
	Synchronization is beginning or ending.
	Synchronization is occurring.
	Notification that one or more instant messages were received.
	Notification that one or more e-mail messages were received.
	There are more notification icons than can be displayed. Tap to display remaining icons.



Using the Navigation Bar and Command Bar

The navigation bar at the top of the screen displays the active program and current time, and allows you to select programs and close screens.

Use the command bar at the bottom of the screen to perform tasks in programs. The command bar includes menu names, buttons, and the input panel button. To create a new item in the current program, tap *New*. To see the name of a button, hold the stylus on the button. Drag the stylus off the button so the command is not carried out.

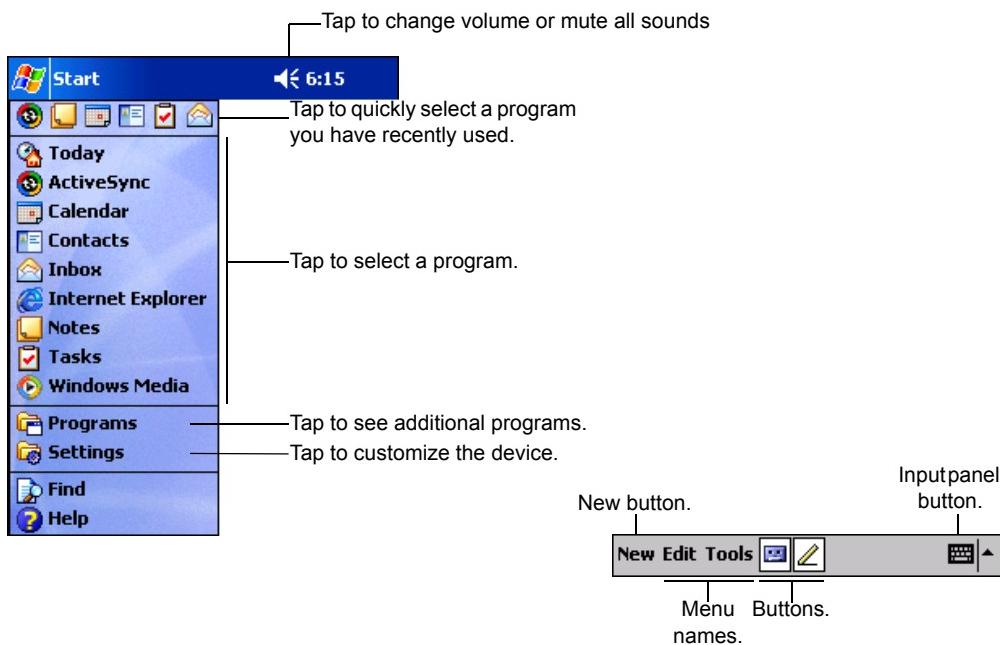


Figure 2-4. Screen Navigation

Selecting Programs

To select a program, tap *Start - Programs*, then the program name. (To select which programs appear on the Start menu, see [Chapter 3, Customizing Your Terminal](#).)

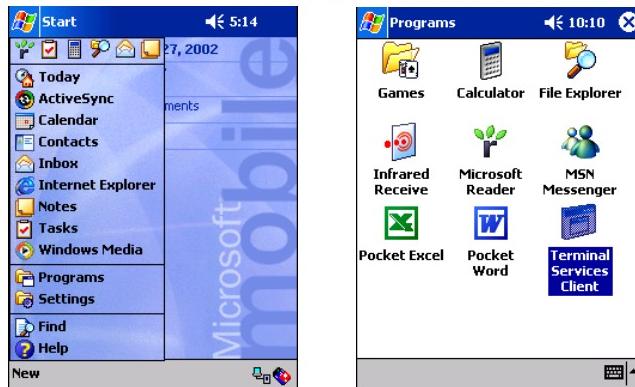


Figure 2-5. Start Menu

Note: Some programs have abbreviated labels for check boxes and drop-down menus. To see the full label, hold the stylus on the label. Drag the stylus off the label so that the command is not carried out.



Using Pop-up Menus

With pop-up menus, you can quickly choose an action for an item. For example, use the pop-up menu in the contact list to delete a contact, make a copy of a contact, or send an e-mail message to a contact. The actions in the pop-up menus vary from program to program.

To access a pop-up menu, hold the stylus on the item you want to perform the action on. When the menu appears, lift the stylus, and tap the action to perform, or tap outside the menu to close it without performing an action.

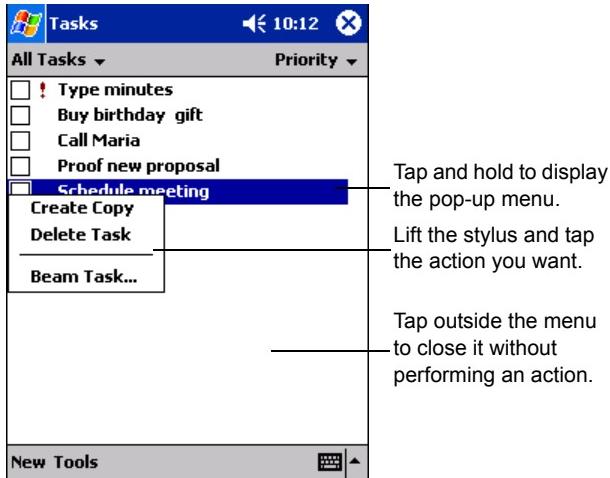


Figure 2-6. Pop-up Menu

Notifications

Your terminal notifies you when you have something to do. For example, if you've set up an appointment in Calendar, a task with a due date in Tasks, or an alarm in Clock, you'll be notified in any of the following ways:

- a message box appears on the screen
- a sound, which you can set, is played
- a light flashes on your terminal.

To choose reminder types and sounds for your terminal, tap *Start - Settings - Personal - Sounds & Notifications*. Select the desired options.

Entering Information

To enter information, you may:

- Use the keyboard. (See [Using the Keyboard](#) on page 2-4 and [Appendix D, Keyboard Maps](#) for keyboard functions.)
- Use the input panel to enter typed text, either using the soft keyboard or writing characters.
- Write directly on the screen.
- Draw pictures on the screen.
- Speak into the microphone to record a message.
- Scan bar code data into data fields.
- Use Microsoft® ActiveSync® to synchronize or copy information from your host computer to your terminal. For more information on ActiveSync, see [Chapter 4, Communications](#) or ActiveSync Help on your host computer.

Entering Information Using the Input Panel

Use the input panel to enter information in any program. You can either type using the soft keyboard or write using Block Recognizer, Letter Recognizer, or Transcriber. In any case, the characters appear as typed text on the screen.



To show or hide the input panel, tap the Input Panel button. Tap the arrow next to this button to view input methods.

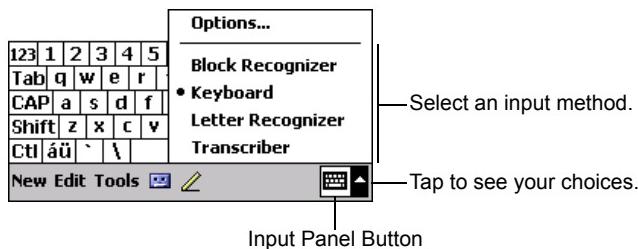


Figure 2-7. Input Panel Button

When you use the input panel, your terminal anticipates the word you are typing or writing and displays it above the input panel. When you tap the displayed word, it is inserted into your text at the insertion point. The more you use your terminal, the more words it learns to anticipate.

To change input settings, such as the number of words suggested at one time, tap *Options* from the Input Panel menu, and tap the tabs to see each setting screen.

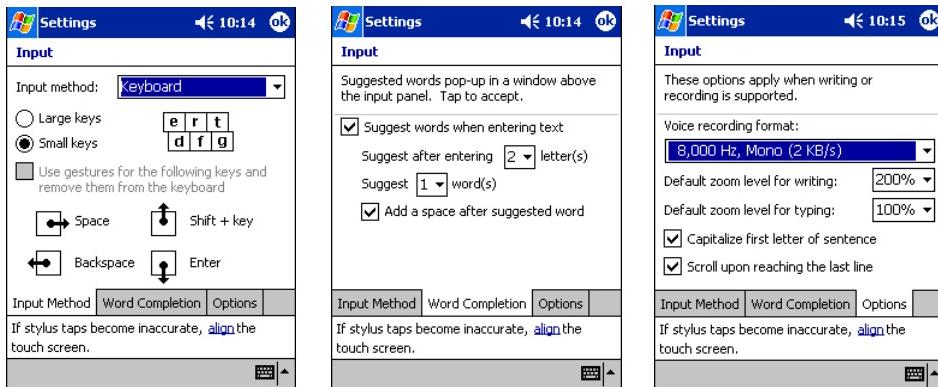


Figure 2-8. Input Panel Options

Using the Soft Keyboard

To type with the soft keyboard:

1. Tap the arrow next to the Input Panel button, then *Keyboard*.

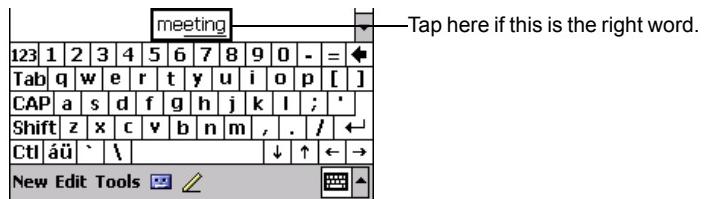


Figure 2-9. Soft Keyboard

2. On the soft keyboard, tap the keys with your stylus.

Using the Block Recognizer

To use Block Recognizer:

1. Tap the arrow next to the Input Panel button, then *Block Recognizer*.

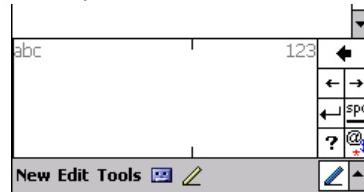


Figure 2-10. Block Recognizer

2. Write a letter in the left side of the box, or a number in the right side, using special character strokes.
3. When you write a letter, it is converted to typed text on the screen. For specific instructions on using Block Recognizer, with Block Recognizer open, tap the question mark next to the writing area, or see [Appendix A, Block Recognizer Characters](#).



Using the Letter Recognizer

To use Letter Recognizer:

1. Tap the arrow next to the Input Panel button, then *Letter Recognizer*.

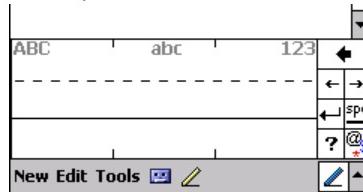


Figure 2-11. Letter Recognizer

2. Write letters or numbers in the writing area, just as you would on paper. Write capital letters in the left side of the box, numbers in the right side, and lower case letters in the center.

When you write a letter, it is converted to typed text on the screen. For instructions on using Letter Recognizer, with Letter Recognizer open, tap the question mark next to the writing area.

Using the Transcriber

To use Transcriber:

1. Tap the arrow next to the Input Panel button, then *Transcriber*.



Figure 2-12. Transcriber

2. Write anywhere on the screen.

When you write anywhere on the screen, Transcriber changes the written characters to typed characters. For instructions on using Transcriber, with Transcriber open, tap the question mark next to the writing area.

Writing on the Screen

In any program that accepts writing, such as the Notes program and the *Notes* tab in Calendar, Contacts, and Tasks, you can use your stylus to write directly on the screen.

To write on the screen, tap the Pen button to switch to writing mode. Lines appear on the screen to guide you.

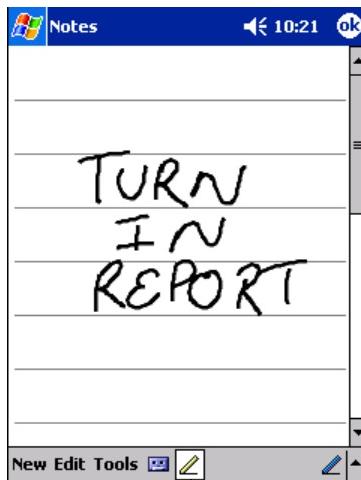


Figure 2-13. Writing on the Screen

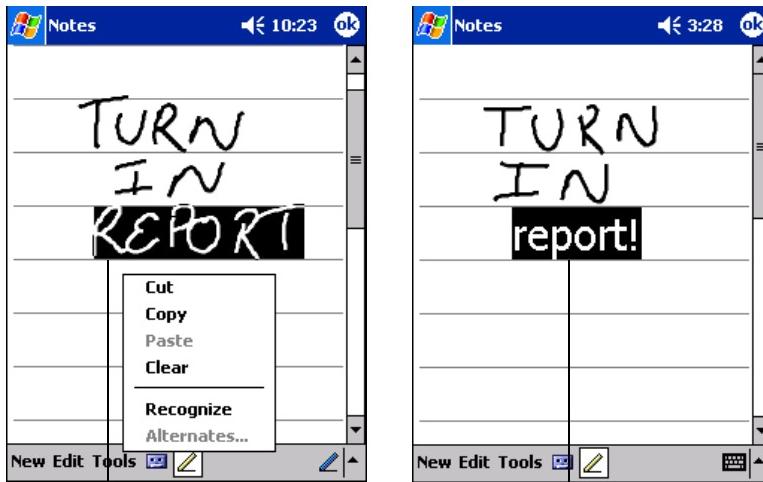
Note: Some programs that accept writing do not have the Pen button. See the documentation for that program to find out how to switch to writing mode.



Converting Writing to Text

To convert your writing to text, tap *Tools - Recognize*.

To convert certain words, select them before tapping *Recognize* on the *Tools* menu (or tap and hold the selected words, then tap *Recognize* on the pop-up menu). If a word is not recognized, it is left as writing.



Select the text you want to convert and tap *Recognize* on the pop-up menu.

The writing is turned into text.

Figure 2-14. Writing on the Screen

If the conversion is incorrect, select different words from a list of alternates or return to the original writing. Tap and hold the incorrect word only. On the pop-up menu, tap *Alternates*.

A list of alternate words appears. Tap the word you want to use, or tap the writing at the top of the menu to return to the original writing.

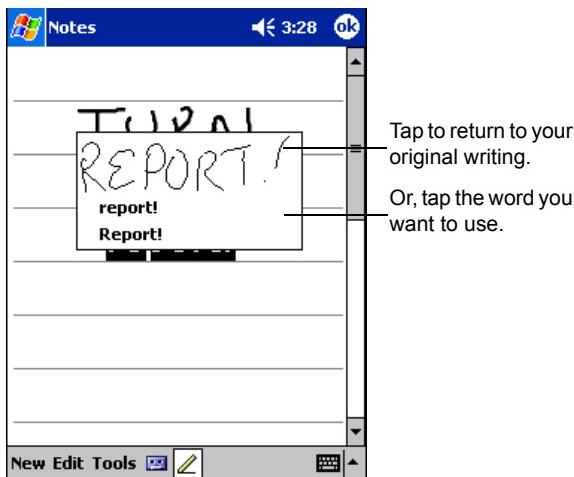


Figure 2-15. Alternate List

Writing Tips

- Write neatly.
- Write on the lines and draw descenders below the line. Cross off the "t" and write apostrophes below the top line so they are not confused with the word above. Write periods and commas above the line.
- For better recognition, try increasing the zoom level to 300% using the *Tools* menu.
- Leave large gaps between words so your terminal can easily tell where words begin and end.
- Hyphenated words, foreign words that use special characters such as accents, and some punctuation cannot be converted.
- If you add writing to a word to change it (such as changing a "3" to an "8") after you attempt to recognize the word, the writing you add is not included if you try to recognize the writing again.

Selecting Text

To edit or format typed text, select it by dragging the stylus across the text. Cut, copy, and/or paste text by holding the selected words then tapping an editing command on the pop-up menu, or by tapping the command on the *Edit* menu.



Selecting Writing

To select writing to edit or format:

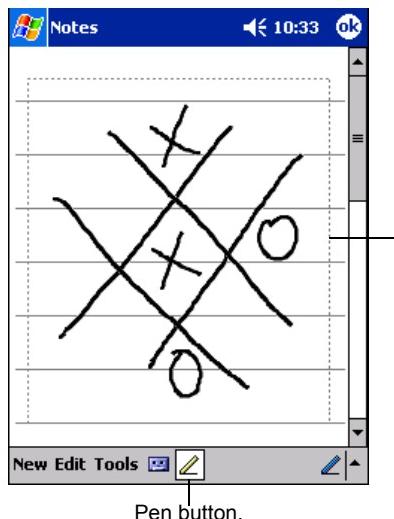
1. Tap and hold the stylus next to the text you want to select until the insertion point appears.
2. Drag the stylus across the text.

If you accidentally write on the screen, tap *Tools - Undo* and try again. You can also select text by tapping the *Pen* button to deselect it, then dragging the stylus across the screen.

You can cut, copy, and paste written text in the same way you work with typed text: tap and hold the selected words, then tap the command from the pop-up menu, or select the command from the *Edit* menu.

Drawing on the Screen

Drawing on the screen is similar to writing on the screen. To create a drawing, cross three ruled lines on your first stroke. A drawing box appears. Subsequent strokes in or touching the drawing box become part of the drawing. Drawings that do not cross three ruled lines are treated as writing.



The drawing box indicates the boundaries of the drawing.

Pen button.

Figure 2-16. Drawing on the Screen

Note: To change the zoom level, tap Tools, then a zoom level.

Selecting a Drawing

To select a drawing to edit or format, tap and hold the stylus on the drawing until the selection handle appears.

To select multiple drawings, deselect the Pen button, then drag to select the drawings you want.

To cut, copy, and paste drawings, tap and hold the selected drawing, then tap an editing command on the pop-up menu, or tap the command on the *Edit* menu. To resize a drawing, deselect the Pen button and drag a selection handle.

Recording a Message

You may record a message to capture thoughts, reminders, and phone numbers. In Calendar, Tasks, and Contacts, you can include a recording in the *Notes* tab. In the Notes program, you can either create a stand-alone recording or include a recording in a written note. To include the recording in a note, open the note first.

To create a recording:

1. Hold the terminal's microphone near your mouth or other source of sound.
2. Start the Notes Application.
3. Tap the Record icon to begin recording.

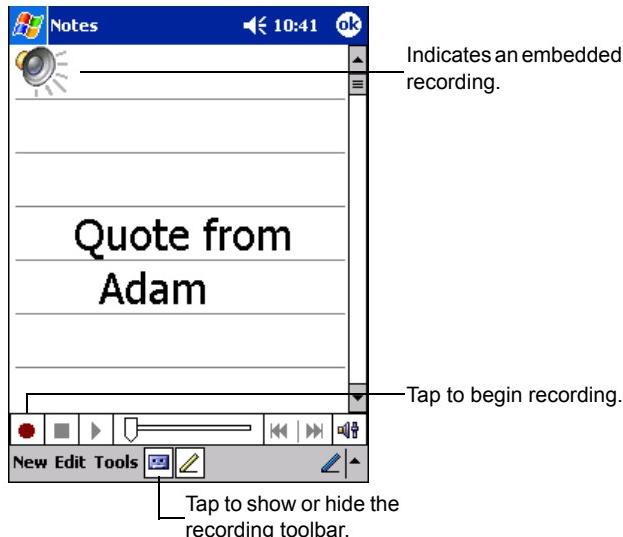


Figure 2-17. Recording Screen



4. When you are finished, tap the **Stop** button. The new recording appears in the note list or as an embedded icon.
5. To play a recording, tap it in the list or tap its icon in the note.

Entering Data via the Bar Code Scanner (Scan Wedge)

Using the Scan Wedge program, the integrated bar code scanner on your terminal can scan data into data fields in the same way data is entered via the keyboard. See [HTML Scan Demo](#) on page B-4 for more information.

Using My Text

When using Inbox or MSN Messenger, use My Text to quickly insert preset or frequently used messages into the text entry area. To insert a message, tap *My Text* and tap a message.

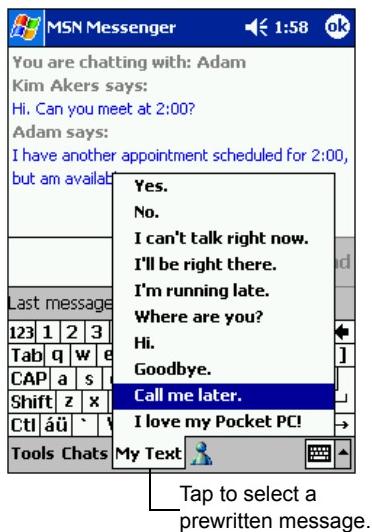


Figure 2-18. Using My Text

Note: You can add text after inserting a My Text message before sending it.

To edit a My Text message, tap **Tools - Edit - My Text Messages**. Select the message you wish to edit and make the changes.

Finding Information

The Find feature locates information. Tap *Start - Find* to launch this feature. Enter the text you want to find, select a data type, then tap *Go*.

To find information taking up storage space on your terminal, select *Larger than 64 KB* in *Type*.

You can also use the File Explorer to find files and organize them into folders. Tap *Start - Programs - File Explorer* to launch Explorer.

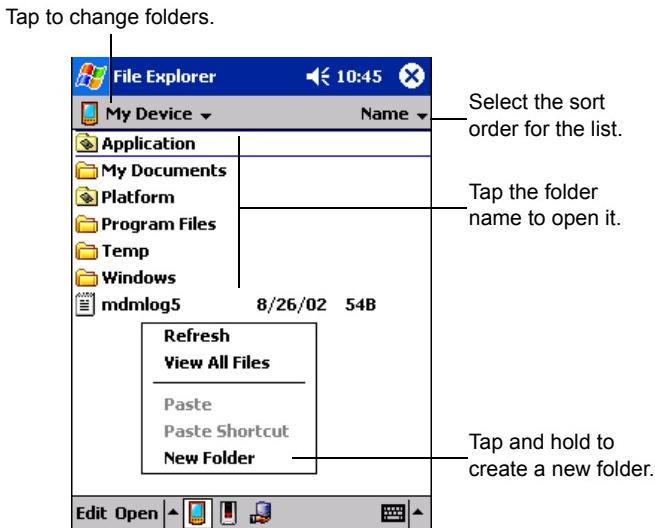
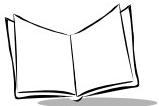


Figure 2-19. File Explorer

Note: To move files in File Explorer, tap and hold the item, then tap Cut or Copy and Paste on the pop-up menu.



Scanning

The terminal has an integrated scanner which allows you to collect data by scanning one or two-dimensional bar codes. See [Appendix B, Demo Program](#) for a sample scanning application.

To scan bar codes:

1. Ensure that your terminal is loaded with a scanning application.
2. Aim the scan exit window at the bar code.
3. Press either the right or left scan trigger. Make sure the red scan beam covers the entire bar code. The green scan LED lights and a beep sounds to indicate a successful decode.

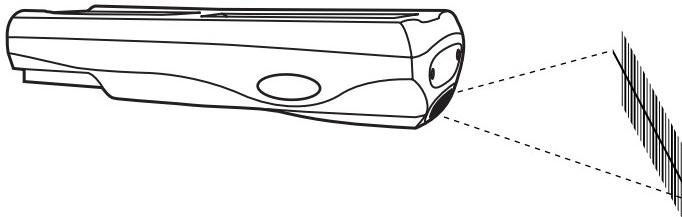


Figure 2-20. Scanning

Scan LED Indicator

See [Parts of the Terminal](#) on page 1-4 for the location of the Scan LED on the terminal.

Table 2-3. Scan LED Indicator

LED Status	Indication
Off	Not scanning.
Solid Red	Laser enabled. Scanning in process.
Solid Green	Successful decode.

Resetting Your Terminal

If your terminal stops responding to input from buttons or the screen, reset it by performing a soft or hard reset.

Performing a Soft Reset

A soft reset restarts the terminal and saves all stored records and entries. However, files that remain open during a soft reset may not be retained.

Ensure that your terminal is awake before performing a soft reset. If necessary, press the Power key to wake up your terminal.

To perform a soft reset press and hold the Power key (for approximately 10 seconds) and release it as soon as the screen changes and the terminal begins to reboot.

Performing a Hard Reset

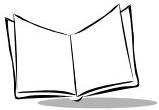
A hard reset also restarts your terminal, but erases all stored records and entries that are not saved in the Flash File System. *Therefore, never perform a hard reset unless a soft reset does not solve your problem.*

Note: You can restore any data previously synchronized with your host computer during the next ActiveSync operation.

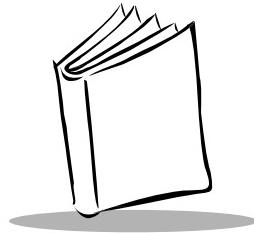
To perform a hard reset:

1. Remove the battery door.
 2. Press Power key + Scan button, and release.
 3. Replace the battery door.
 4. As the terminal reboots, the Symbol splash screen displays for about 60 seconds.
 5. Realign the screen, as described in [Aligning the Screen](#) on page 1-21.
-

Note: With a hard reset, the current date and time, formats, preferences, and other settings are restored to their factory default settings unless they are restored by use of .reg files located in the Flash File System.



PDT 8000 Series Product Reference Guide

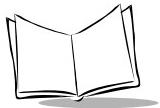


Chapter 3

Customizing Your Terminal

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Introduction

This chapter provides basic instructions for customizing your terminal by adjusting settings and installing additional software.

Adjusting Settings

To view available options for your terminal settings, tap *Start - Settings*. You can adjust settings in either the *Personal* tab or the *System* tab at the bottom of the screen.

- Personal Tab
 - Buttons: assign programs to the application hardware buttons
 - Input: select an input method and change desired options
 - Menus: customize what appears on the *Start* menu and enable a pop-up menu from the New button
 - Owner Information: enter your contact information
 - Password: limit access to your terminal
 - Sounds & Notifications: select the type of actions you want to hear sounds for and customize how you are notified about different events
 - Today: customize the information displayed on the Today screen.
- System Tab
 - Backlight: customize when and for how long the backlight should stay on
 - Clock: change the time or set alarms
 - Power: set the terminal to turn off after a period of time to conserve battery
 - Remove Programs: remove programs installed in the storage memory
 - Screen: align the screen.

Flash Storage

Programs pre-installed on your terminal are stored in ROM (read-only memory). You cannot remove, modify, or accidentally lose this software. You may add programs and data files to RAM (random access memory).

In addition to the RAM-based storage standard on Pocket PC terminals, the terminal is also equipped with a non-volatile Flash-based storage area which can store data (partitions) that



can not be corrupted by a hard reset. This Flash area is divided into two categories: Flash File System (FFS) Partitions and Non-FFS Partitions.

FFS Partitions

The terminal includes two FFS partitions. These partitions appear to the terminal as a hard drive that the OS file system can write files to and read files from. Data is retained even if power is removed.

The two FFS partitions appear as two separate folders in the Windows CE file system and are as follows:

- **Platform:** The Platform FFS partition contains Symbol-supplied programs and Dynamic Link Libraries (DLLs). This FFS is configured to include DLLs that control system operation. Since these drivers are required for basic terminal operation, only experienced users should modify the content of this partition.
- **Application:** The Application FFS partition is used to store application programs.

Working with FFS Partitions

Because the FFS partitions appear as folders under the Windows CE file system, they can be written to and read like any other folder. For example, an application program can write data to a file located in the Application folder just as it would to the Windows folder.

However, the file in the Application folder is in non-volatile storage and is not lost on a hard reset (e.g., when power is removed for a long period of time).

Standard tools such as ActiveSync can be used to copy files to and from the FFS partitions. They appear as the “Application” and “Platform” folders to the ActiveSync explorer. This is useful when installing applications on the terminal. Applications stored in the Application folder are retained even when the terminal is hard reseted, just as the PDT 8000 Demo program is retained in memory.

Windows CE expects certain files to be in the Windows folder, residing in volatile storage. Windows CE maintains the System Registry in volatile storage. There are two device drivers included in the Windows CE image to assist developers in configuring the terminal following a hard reset: **RegMerge** and **CopyFile**.

RegMerge.dll

Regmerge.dll is a built-in driver that allows registry edits to be made to the Windows CE Registry. Regmerge.dll runs very early in the boot process and looks for registry files (.reg files) in certain Flash File System folders during a hard reset. It then merges the registry changes that are in these files into the system registry located in RAM.

Since the registry is re-created on every hard reset from the default ROM image, the RegMerge driver is necessary to make registry modifications persistent over hard resets.

Regmerge is configured to look in two specific folders for .reg files in the following order:

\Platform

\Application

Regmerge continues to look for .reg files in these folders until all folders are checked. This allows folders later in the list to override folders earlier in the list. This way, it is possible to override Registry changes made by the Platforms partitions folders. Take care when using Regmerge to make Registry changes. The SDK contains examples of .reg files.

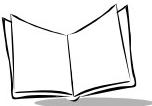
Note: *Regmerge only merges the .reg files on hard resets. The merge process is skipped during a soft reset.*

Typically, you should not need to make modifications to registry values for drivers loaded before Regmerge. However, sometimes during software development, you may need to modify these values. Since these early loading drivers read these keys before Regmerge gets a chance to change them, you must soft reset the terminal after a hard reset. The soft reset does not re-initialize the registry, and the early loading driver reads the new registry values.

Do not use Regmerge to modify built-in driver registry values, or merge the same Registry value to two files in the same folder, as the results are undefined.

CopyFile

CopyFile copies files from one folder to another on a hard reset. Files can be copied from a non-volatile partition (Application or Platform) to the Windows or other volatile partition during a hard reset. During a hard reset **CopyFile** looks for files with a .CPY extension on the FFS partition. These files are text files containing the source and destination for the desired files to be copied separated by ">".



Non-FFS Partitions

Non-FFS Partitions include additional software and data pre-loaded on your terminal that can be upgraded. Unlike FFS Partitions, these partitions are not visible when the operating system is running. They also contain system information. Non-FFS Partitions include the following:

- **Windows CE:** the complete Windows CE operating system is stored on Flash devices. If necessary, the entire OS image may be downloaded to the terminal using files provided by Symbol. Any upgrades must be obtained from Symbol. This partition is mandatory for the terminal.
- **Splash Screen:** a bitmap smaller than 16 Kb, displayed as the terminal cold-boots. You may download a customized screen to display (see [Chapter 11, Configuring the Terminal](#)).
- **IPL (Initial Program Loader):** This program interfaces with the host computer and allows you to download any or all of the partitions listed above, as well as updated versions of IPL. Use caution downloading updated IPL versions; incorrect downloading of an IPL causes permanent damage to your terminal. IPL is mandatory for the terminal.
- **Partition Table:** Identifies where each partition is loaded in the terminal.

Assigning Applications to Application Buttons

To re-assign a different application to a button:

1. Tap *Start*, then *Settings*.
2. On the *Personal* tab, tap *Buttons*.

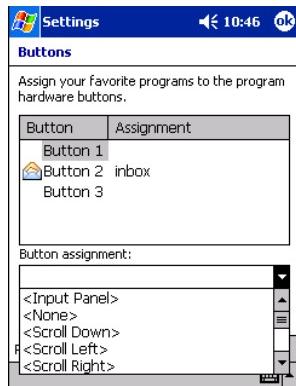


Figure 3-1. Buttons Screen

3. Tap the button on the list that you want to change, then use the *Button assignment* drop-down menu to select a new application for that button.
4. Tap *OK*.

Assigning User-Written Applications to Buttons

Use **Regmerge** to modify the registry during a hard reset to assign user-written applications to the application buttons. These buttons remain assigned after a hard reset.

Note: Although located in the Flash File System, we recommend copying user applications to the Windows directory (using *CopyFile*) and running them from there. See the Help file for more information.



Adding Programs

Install the appropriate software on your host computer before installing it on your terminal.

1. Tap *Start - Settings*. On the *System* tab, tap *About*. In the *Version* tab, note the information in *Processor*.
2. Download the program to your host computer (or insert the CD or disk that contains the program into your host computer). You may see a single *.xip file, *.exe file, a *.zip file, or a Setup.exe file.
3. Read any installation instructions, Read Me files, or documentation that comes with the program. Many programs provide special installation instructions.
4. Connect your terminal and host computer.
5. Double-click the *.exe file.

If the file is an installer, the installation wizard begins. Follow the directions on the screen. Once the software is installed on your host computer, the installer transfers the software to your terminal.

If the file is not an installer, an error message states that the program is valid but is designed for a different type of computer. Move this file to your terminal. If you cannot find installation instructions for the program in the Read Me file or documentation, use ActiveSync Explore to copy the program file to the Program Files folder on your terminal. For more information on copying files using ActiveSync, see ActiveSync Help.

When installation is complete, tap *Start*, *Programs*, then the program icon to select it.

Adding a Program from the Internet

1. Tap *Start - Settings*. On the *System* tab, tap *About*. In the *Version* tab, note the information in *Processor*.
2. Download the program to your terminal from the Internet using Pocket Internet Explorer. You may see a single *.xip, *.exe, *.zip file, or a Setup.exe file.
3. Read any installation instructions, Read Me files, or documentation that comes with the program. Many programs provide special installation instructions.
4. Tap the file, such as a *.xip or *.exe file, to launch the installation wizard. Follow the directions on the screen.

Adding a Program to the Start Menu

Tap *Start - Settings - Menus*. On the *Start Menu* tab, select the check box for the program you want to add to the Start Menu.

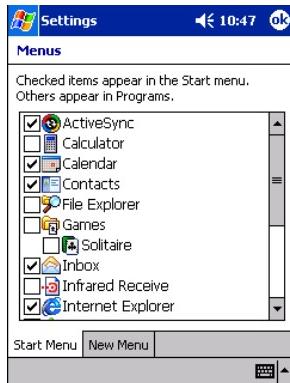


Figure 3-2. Menus Screen

If you do not see the program listed, either use File Explorer to move the program to the Start Menu folder or use ActiveSync on the host computer to create a shortcut to the program and place the shortcut in the Start Menu folder.

Using File Explorer to Add to the Start Menu

1. Tap *Start - Programs - File Explorer*, and locate the program (tap the folder list, labeled My Documents by default, then My Device to list all folders on the terminal).
2. Tap and hold the program and tap *Cut* on the pop-up menu.
3. Open the *Start Menu* folder in the *Windows* folder, tap and hold a blank area of the window, and tap *Paste* on the pop-up menu. The program appears on the *Start* menu.

For more information on using File Explorer, see *Finding Information* on page 2-21.

Note: Avoid placing direct links in the Start Menu to programs located in flash memory (Application or Platform). Copy these programs to the Windows folder first.



Using ActiveSync to Add to the Start Menu

1. Use the Explorer in ActiveSync on your host computer to explore your terminal's files and locate the program.
2. Right-click the program, then click *Create Shortcut*.
3. Move the shortcut to the Start Menu folder in the Windows folder. The shortcut appears on the *Start* menu.

For more information, see ActiveSync Help.

Removing Programs

To remove a program, tap *Start*, then *Settings*. On the *System* tab, tap *Remove Programs*.

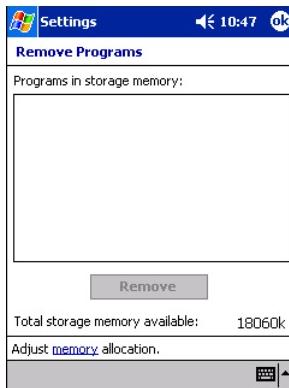
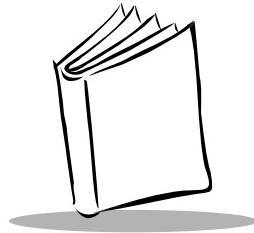


Figure 3-3. Remove Programs Screen

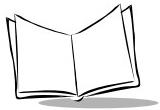
If the program does not appear in the list of installed programs, use File Explorer on your terminal to locate the program, tap and hold the program, then tap *Delete* on the pop-up menu.



Chapter 4 *Communications*

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PDT 8000 Series Product Reference Guide

Introduction

Your terminal is capable of communicating with a number of hosts, including development PCs, serial devices, printers, etc. The available accessories serve as essential data communication devices, enabling you to synchronize the information on your terminal with the information on your host device using ActiveSync. With the appropriate accessory and software, the terminal can establish a number of connection types, such as a serial connection and a modem connection.

This chapter provides information on installing the appropriate communication software and setting up the appropriate accessory to enable communication between the terminal and the host device.

Synchronization Software Installation

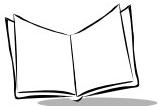
Using ActiveSync, you can synchronize the information on your terminal with the information on your host computer. Changes you make on your terminal or host computer appear in both places after you synchronize.

Installing ActiveSync

To install ActiveSync, download the latest version of the software from <http://www.microsoft.com>. Refer to the installation and RAS instructions included with the ActiveSync software you download.

Setting up a Partnership

After installation is complete, the ActiveSync Setup Wizard helps you connect your terminal to your host computer, set up a partnership so you can synchronize information between your terminal and host computer, and customize synchronization settings. Your first synchronization occurs automatically when you finish using the wizard.



During the first synchronization, information stored in Microsoft Outlook (Calendar, Contacts, and Tasks) on your host computer is copied to your terminal. You can now disconnect your terminal from your host computer.

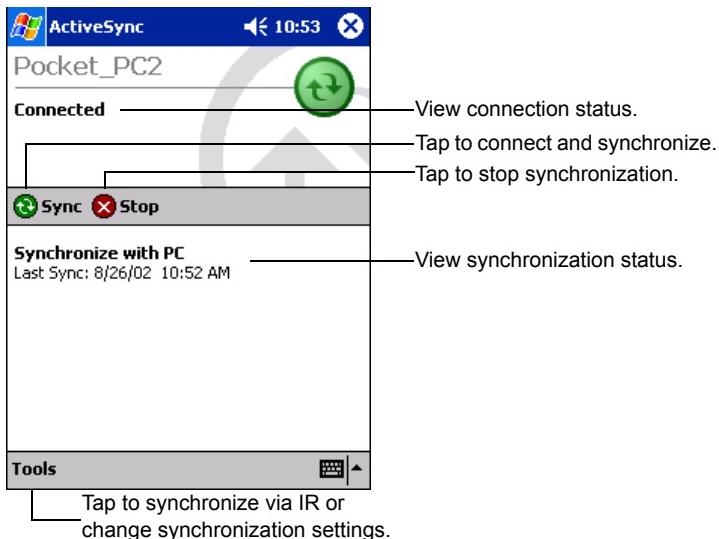


Figure 4-1. ActiveSync

Note: You must perform your first ActiveSync operation with a local, direct connection.

To retain partnerships after a hard reset, capture partnership registry information in a .reg file and save it in the Flash File System. See the Windows CE Help file for details.

For more information about using ActiveSync, start ActiveSync on your host computer, then see ActiveSync Help.

Communication Setup

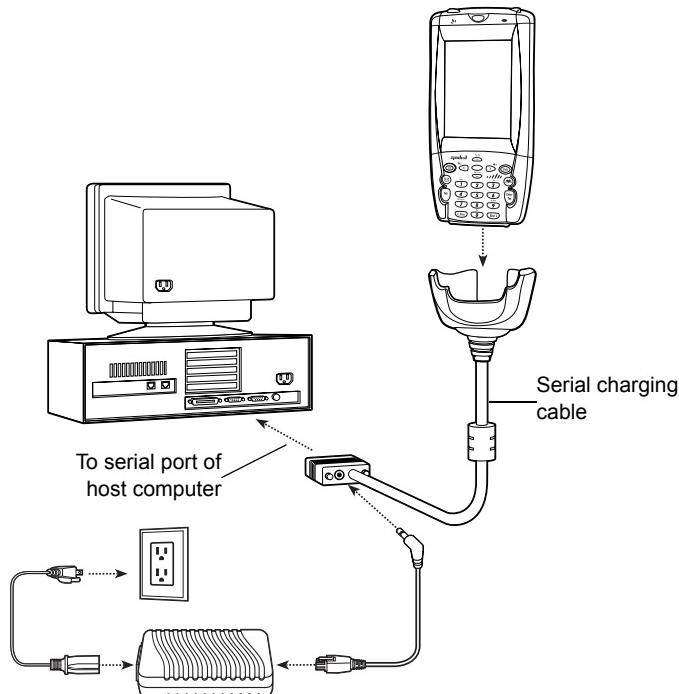
The terminal can communicate with the host computer using the following accessories:

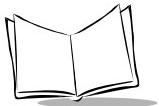
- Serial Charging Cable (through a serial connection)
- Single-Slot Serial Cradle (through a serial connection)
- Single-Slot Modem Cradle (through a modem connection)
- Snap-On Modem (through a modem connection).

For each accessory, you will need to follow instructions on configuring your host computer, setting up the connection between the terminal and the host computer, and configuring the terminal.

Using the Serial Charging Cable

1. Install ActiveSync on your host computer.
2. Connect your terminal to the host computer, via the Serial Charging Cable, as shown below:





Note: The serial charging cable requires a dedicated port. It cannot share a port with an internal modem or other device. If you are unsure about the location of the serial port on your computer, refer to the user's manual supplied with the computer.

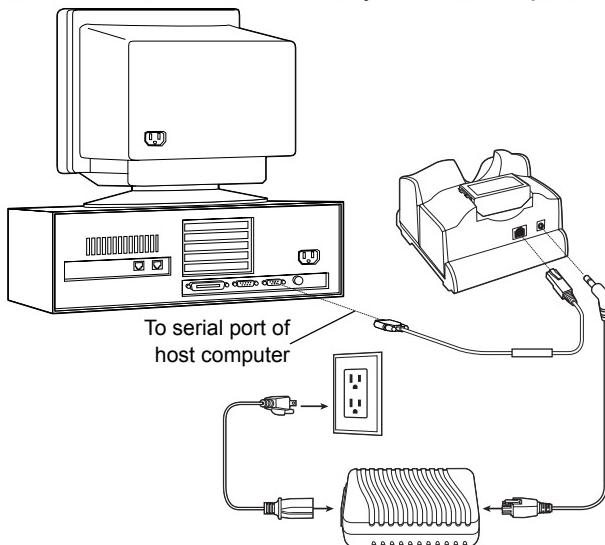
3. If this is your first synchronization, follow the instructions on the host computer screen to setup the partnership. Items to be synchronized may be customized, and you may select to synchronize continuously as information changes, upon connection, or manually by clicking the Sync button on the toolbar of your host computer.

Note: Every PDT 8000 terminal should have a unique device name. Never try to synchronize more than one PDT 8000 terminal to the same device name.

4. If you already created a partnership between your host computer and terminal, synchronization will occur automatically, immediately following step 2.

Using the Single-Slot Serial Cradle

1. Install ActiveSync on your host computer.
2. Connect your CRD8000-1000S cradle to your host computer as shown below:



Note: The cradle requires a dedicated port. It cannot share a port with an internal modem or other device. If you are unsure about the location of the serial port on your host computer, refer to the user's manual supplied with the computer.

3. Turn on the terminal and slide it into the cradle.

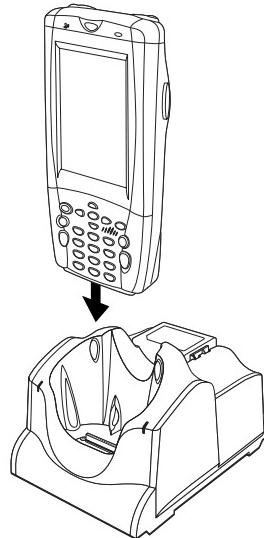


Figure 4-2. Inserting the Terminal in the Cradle

4. If this is your first synchronization, follow the instructions on the host computer screen to setup the partnership. Items to be synchronized may be customized, and you may select to synchronize continuously as information changes, upon connection, or manually by clicking the Sync button on the toolbar of your host computer.

Note: Every PDT 8000 terminal should have a unique device name. Never try to synchronize more than one PDT 8000 terminal to the same device name.

5. If you already created a partnership between your host computer and terminal, synchronization will occur automatically, immediately following step 3.



Using the Single-Slot Modem Cradle or the Snap-On Modem

1. Install ActiveSync on your host computer.

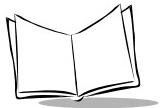
Note: Before communicating through a modem connection, you must create a partnership between your terminal and your host computer using a serial connection to your host computer. See [Setting up a Partnership](#) on page 4-3 for detailed instructions.

2. Configure your terminal for a modem connection.
 - a. Tap **Start - Settings - Connections tab - Connections icon.**
 - b. Select **Work** from the *My network card connects to:* drop-down menu.
 - c. Tap the **Modify** button under the *When needed, automatically connect to the Internet using these settings:* drop-down menu.
 - d. Tap **New...** in the Modem tab.
 - e. Enter a name for the connection in the *Enter a name for the connection:* text box.
 - f. If you are using the single-slot modem cradle, select **Hayes Compatible on COM1** from the *Select a modem:* drop-down menu.
If you are using the snap-on modem, select **Powered Serial on COM7** from the *Select a modem:* drop-down menu.
 - g. Select **57600** from the *Baud-rate:* drop-down menu.
 - h. Tap the **Advanced...** button.
 - i. Select **8, None, 1, and Hardware** in the *Port Settings tab.*
 - j. Select the appropriate times for terminal use, if you dial-in server requires manual input for each connection.
 - k. Tap the TCP/IP tab.
 - l. Enter parameters supported by your server.
 - m. Tap the Name Servers tab.
 - n. Enter parameters supported by your server.
 - o. Tap the **OK** button. The Make New Connection screen appears.
 - p. Tap the **Next** button.
 - q. Enter the appropriate country code, if necessary, in the *Extra dial-string modem commands:* textbox.
 - r. Tap the **Next** button.

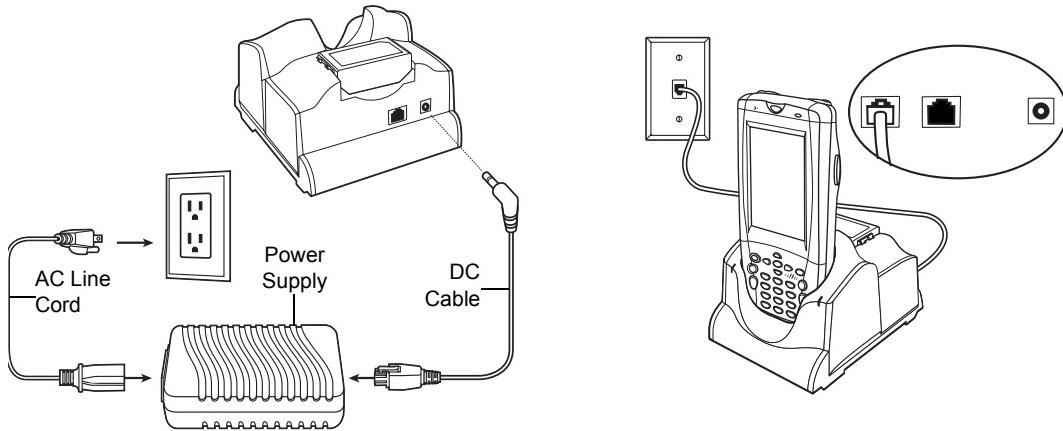
- s. Select other options.
 - t. If necessary, edit *Extra dial-string modem commands*: text to set country parameters.
-

Note: *The modem defaults to operation with US telephone networks. To operate the modem with other country telephone networks, you must change the modem Country Code. See [Available Country Codes](#) on page 4-11 for the appropriate syntax and list of codes.*

- u. Tap the **Finish** button. The name you gave the modem in step 8 appears in the Modem tab.
- v. Tap the **OK** button.
- w. Tap the Dialing Locations tab and setup the location you are calling from.
- x. Tap the **Dialing Patterns...** button and enter the appropriate dialing patterns.
- y. Tap the **OK** button until you exit the Connections screen.

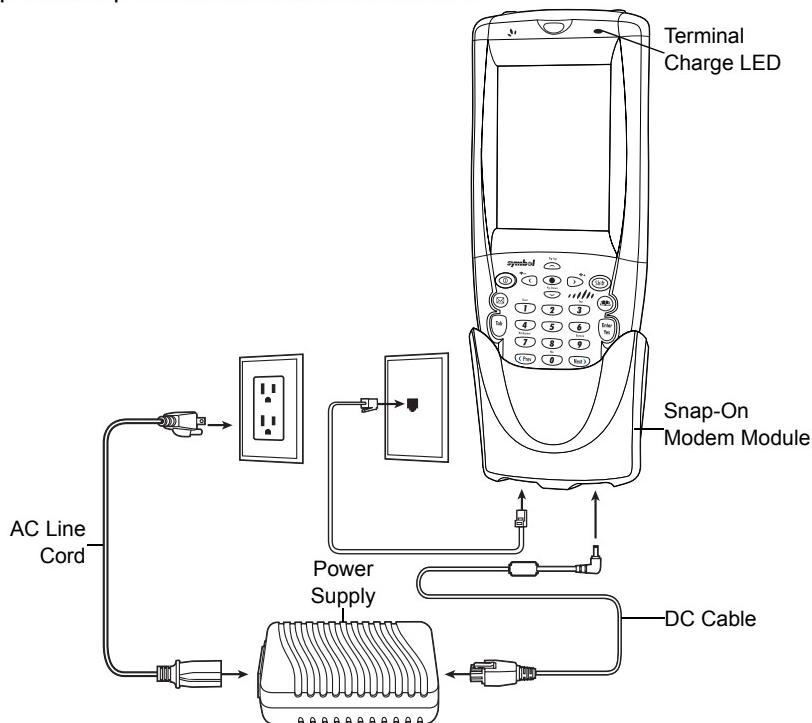


3. Setup your CRD8000-1000M cradle as shown below:



OR

Setup the Snap-On Modem as shown below:



With the above setup completed, you can use your modem connection to synchronize data between your terminal and a host computer (see *Synchronizing Data* on page 4-11) or you can connect to the Internet (see *Connecting to the Internet* on page 4-13).

Available Country Codes

The modem defaults to operation with US telephone networks (country code: B5). To operate the modem with other country telephone networks, you must set the Country Code by entering the Country of Installation command. The modem will adjust its operating parameters to comply with the telephone network in the country specified.

Syntax used: +GCI=<country_code>;

Supported countries and their codes are:

Country	Code	Country	Code	Country	Code
Austria	FD or 0A	Greece	46	Norway	FD or 82
Belgium	FD or 0F	Iceland	FD	Portugal	8B
Brazil	16	Ireland	FD or 57	Spain	FD or A0
Canada	20	Italy	FD or 59	Sweden	FD or A5
Denmark	FD or 31	Liechtenstein	FD	Switzerland	FD or A6
Finland	FD or 3C	Luxembourg	FD	TBR-21 (Europe)	FD
France	FD or 3D	Mexico	73	United Kingdom	FD or B4
Germany	FD or 42	Netherlands	FD or 7B	United States	B5 (Default)

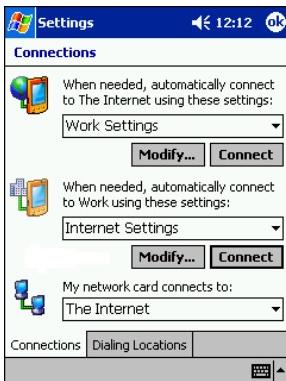
Note: It is highly recommended that you use FD where possible. If you have trouble connecting, use the alternate code where provided.

Synchronizing Data

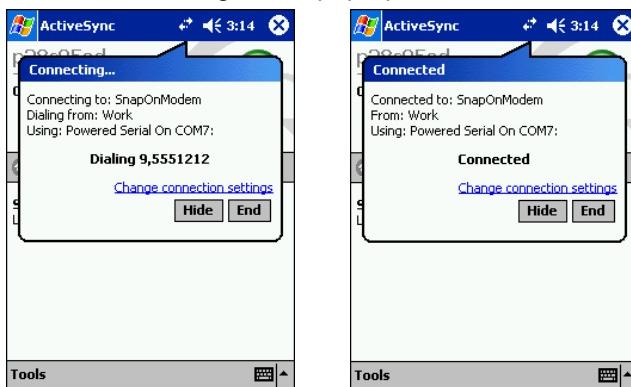
1. Tap *Start - ActiveSync - Tools - Options - PC* and deselect the *Enable synchronization when cradled using:* check box to temporarily disable serial cable detect before using ActiveSync.
2. Tap *Start - ActiveSync - Tools - Options - PC* and select the *Include PC when synchronizing remotely and connect to:* check box to ensure the host computer you wish to synchronize with is identified.
3. Tap *Start - Settings - Connections tab - Connections icon.*



4. Ensure the following connections are made in your Connections tab:



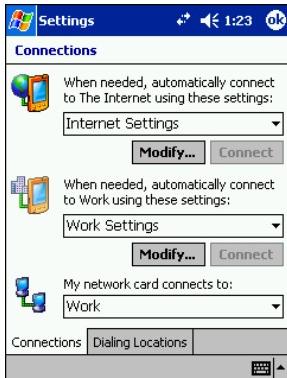
5. Tap the Connect button under the *When needed, automatically connect to work using these settings:* drop-down menu.
6. Enter a User name, Password, and Domain for your connection, if required.
7. Tap the OK button. The connection is authenticated by the host computer and, if successful, a series of dialog boxes pop-up in succession, as shown below:



8. Tap Start - ActiveSync.
9. Tap the Sync icon (prior partnership via a serial connection is required). ActiveSync connects and synchronizes with the host computer.
10. To disconnect, tap the Stop button on the ActiveSync screen.

Connecting to the Internet

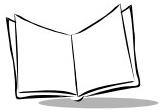
1. Tap *Start - Settings - Connections tab - Connections icon.*
2. Ensure the following connections are made in your Connections tab:



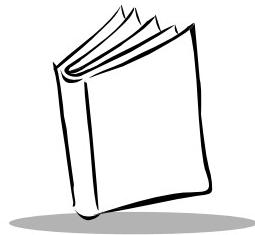
3. Tap the Connect button under the *When needed, automatically connect to The Internet using these settings:* drop-down menu.
4. Enter a User name, Password, and Domain for your connection, if required.
5. Tap the OK button. The connection is authenticated by the host computer and, if successful, a series of dialog boxes pop-up in succession, as shown below:



6. Tap *Start - Internet Explorer* to connect to the Internet.
7. To disconnect, tap the two arrows on the navigation bar to expose the *Connected* dialog box.
8. Tap the End button.



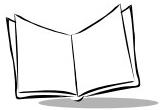
PDT 8000 Series Product Reference Guide



Chapter 5 *Applications*

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Introduction

Your terminal includes Calendar, Contacts, Tasks, Inbox, and Notes applications. You can use these programs individually or together. For example, e-mail addresses stored in Contacts can be used to address e-mail messages in Inbox.

Using ActiveSync, you can synchronize information in these applications between your host computer and your terminal. Each time you synchronize, ActiveSync compares the changes you made on your terminal and host computer and updates both with the latest information. For information on using ActiveSync, see [Chapter 4, Communications](#), and ActiveSync Help on the host computer.

You can switch to any of these programs by tapping them on the *Start* menu.

Calendar

Use Calendar to schedule appointments such as meetings. You can view your appointments in different ways (Agenda, Day, Week, Month, and Year) and easily change views using the *View* menu.

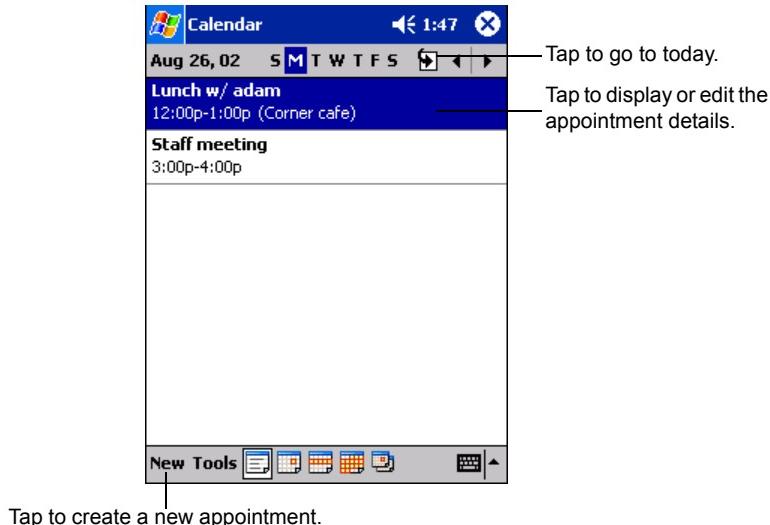


Figure 5-1. Calendar Application



Note: You can customize the Calendar display, such as changing the first day of the week, by tapping Options on the Tools menu.

Creating Appointments

To create an appointment:

1. To open Calendar, tap Start - Calendar.
2. If you are in Day or Week view, tap the desired date and time for the appointment.
3. Tap New.

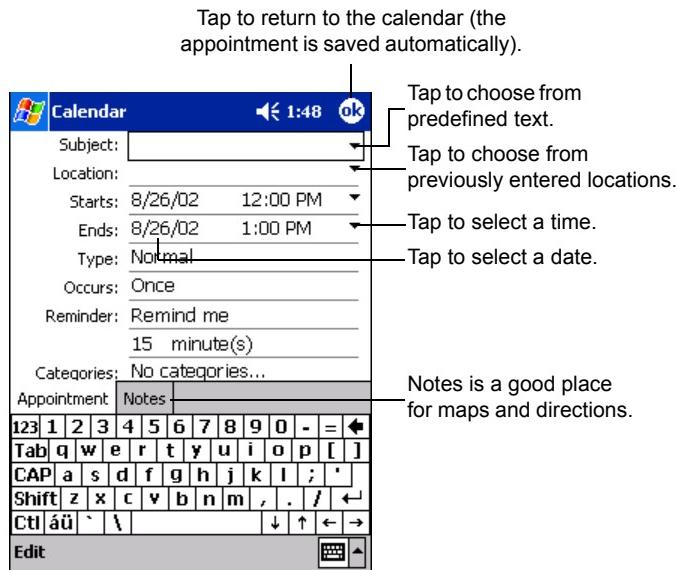


Figure 5-2. Entering an Appointment

4. Using the input panel, enter the subject and a location. Tap first to select the field.
5. If needed, tap the date and time to change them.
6. Enter other desired information. Hide the input panel to see all available fields.
7. To add notes, tap the Notes tab. You can enter text, draw, or create a recording. For more information on creating notes, see [Notes](#) on page 5-12.
8. When finished, tap OK to return to the calendar.

Note: If you select Remind me in an appointment, your terminal notifies you according to the options set in Start - Settings - Personal tab - Sounds & Reminders.

Using the Summary Screen

When you tap an appointment in Calendar, a summary screen displays. Tap *Edit* to change the appointment.

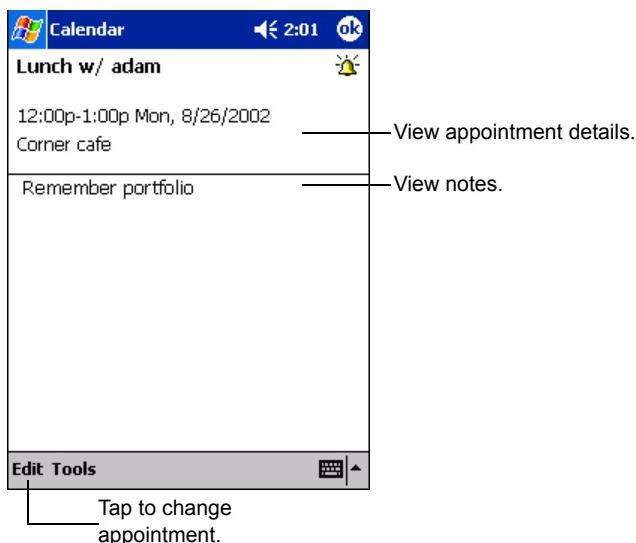


Figure 5-3. Appointment Summary Screen

Creating Meeting Requests

You can use Calendar to set up meetings with users of Outlook or Pocket Outlook. The meeting notice is created automatically and sent either when you synchronize Inbox or when you connect to your e-mail server. Indicate how you want meeting requests sent by tapping *Tools*, then *Options*. If you send and receive e-mail messages through ActiveSync, select *ActiveSync*.

To schedule a meeting:

1. Create an appointment.
2. In the appointment details, hide the input panel, then tap *Attendees*.



3. From the list of e-mail addresses you've entered in Contacts, select the meeting attendees.

The meeting notice is created and placed in the Outbox folder. For more information on sending and receiving meeting requests, see Calendar Help and Inbox Help on your terminal.

Contacts

Contacts maintains a list of associates and friends so you can easily locate information at home or on the road. Using the infrared (IR) port, you can share Contacts information with other terminal users.

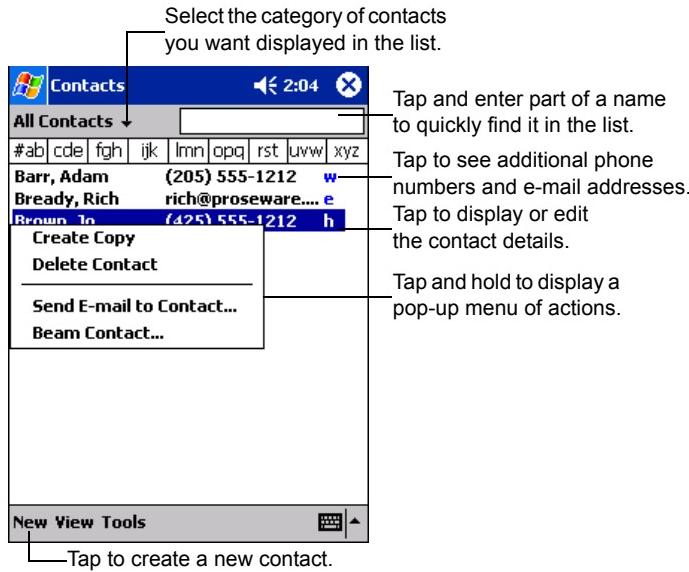


Figure 5-4. Contact Application

Note: To change the way information is listed, tap Tools, then Options.

To create a contact:

1. Tap *New*.

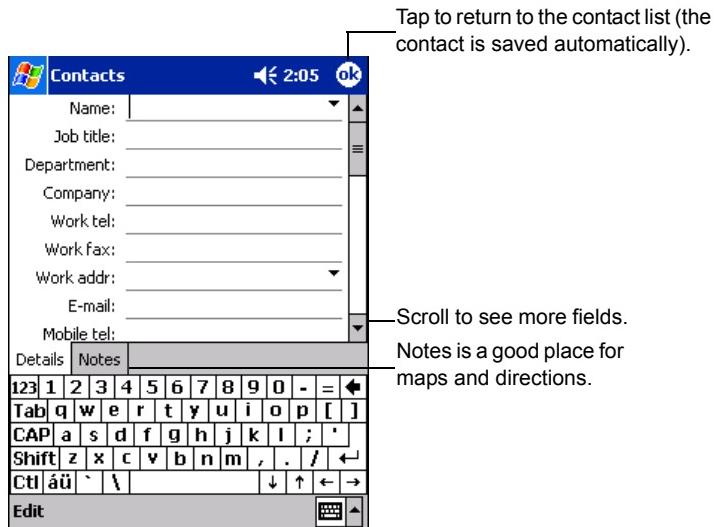


Figure 5-5. Creating a Contact

2. Using the input panel, enter a name and other contact information. Scroll down to see all fields.
3. To assign the contact to a category, scroll to and tap *Categories*. Select a category from the list. In the contact list, you can display contacts by category.
4. To add notes, tap the *Notes* tab. You can enter text, draw, or create a recording. For more information on creating notes, see *Notes* on page 5-12.
5. When finished, tap *OK* to return to the contact list.



You may find a contact in one of four ways:

- In the contact list, enter a contact name in the box under the navigation bar. To show all contacts again, clear text from the box or tap the button to the right of the box.
- In the contact list, tap the category list (labeled All Contacts by default) and select the type of contact to display. To show all contacts again, select *All Contacts*. To view a contact not assigned to a category, select *None*.
- To view the names of companies your contacts work for, in the contact list, tap *View - By Company*. The number of contacts that work for that company appears to the right of the company name.
- Tap *Start - Find*, enter the contact name, select *Contacts* for the type, then tap *Go*.

Using the Summary Screen

When you tap a contact in the contact list, a summary screen displays.

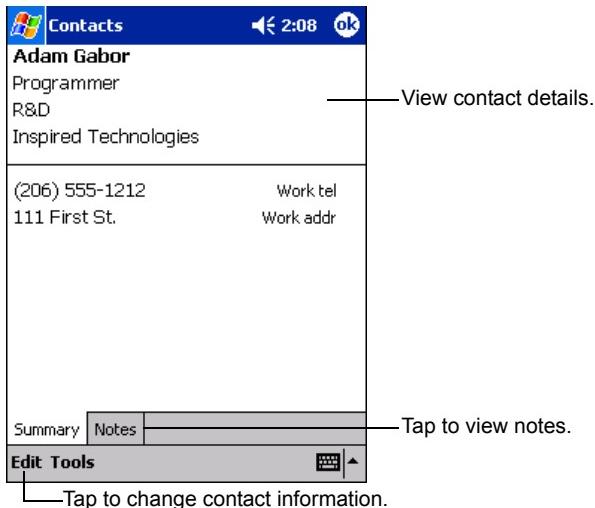


Figure 5-6. Contacts Summary Screen

Tasks

Use Tasks to keep a “to do” list.

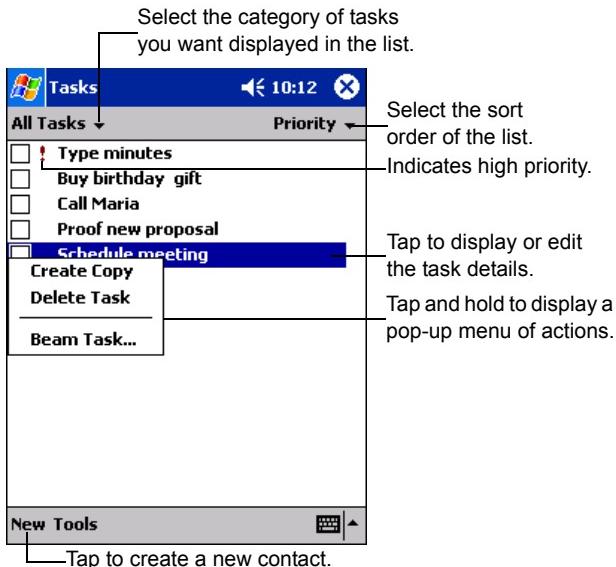
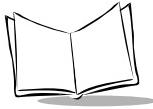


Figure 5-7. Task Application

Note: To change the way information displays in the list, tap Tools, then Options.



To create a task:

1. Tap **New**.

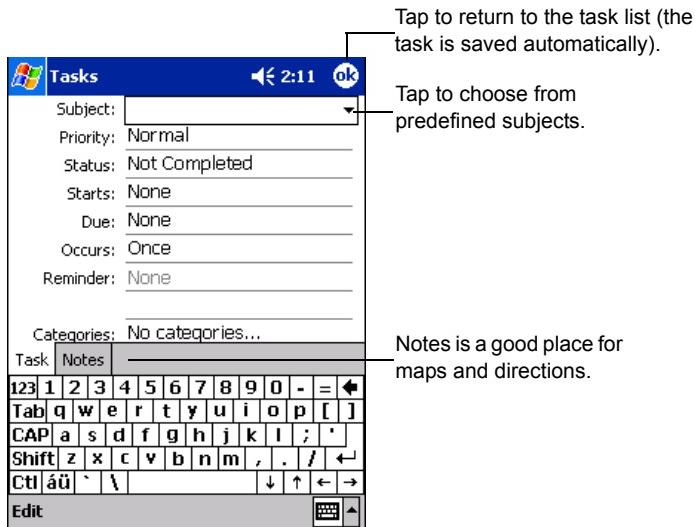


Figure 5-8. Creating a Task

2. Using the input panel, enter a description.
3. You can enter a start date and due date or enter other information by first tapping the field. If the input panel is open, hide it to see all available fields.
4. To assign the task to a category, tap *Categories* and select a category from the list. In the task list, you can display tasks by category.
5. To add notes, tap the *Notes* tab. You can enter text, draw, or create a recording. For more information on creating notes, see *Notes* on page 5-12.
6. Tap **OK** to return to the task list.

Note: To create a task with only a subject, tap Entry Bar on the Tools menu.

Then tap Tap here to add a new task and enter your task information.

Using the Summary Screen

When you tap a task in the task list, a summary screen displays. To change the task, tap *Edit*.

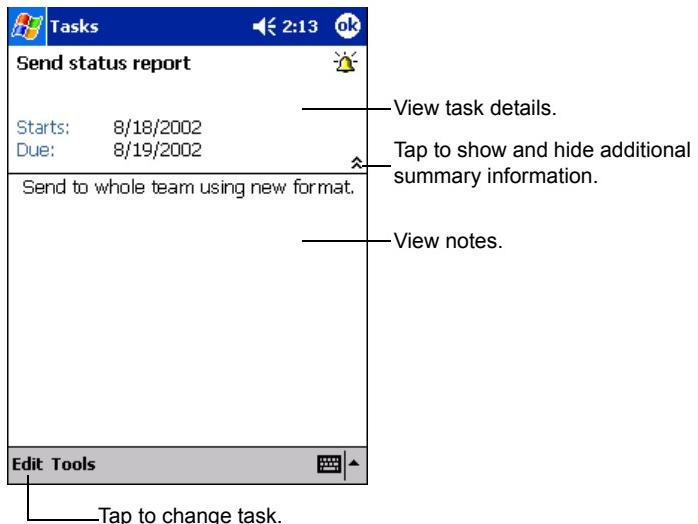


Figure 5-9. Task Summary Screen



Notes

Capture thoughts, reminders, ideas, drawings, and phone numbers with Notes. You can create a written note or a recording. You can also include a recording in a note. If a note is open when you create the recording, it is included in the note as an icon. If the note list is displayed, it is created as a stand-alone recording.

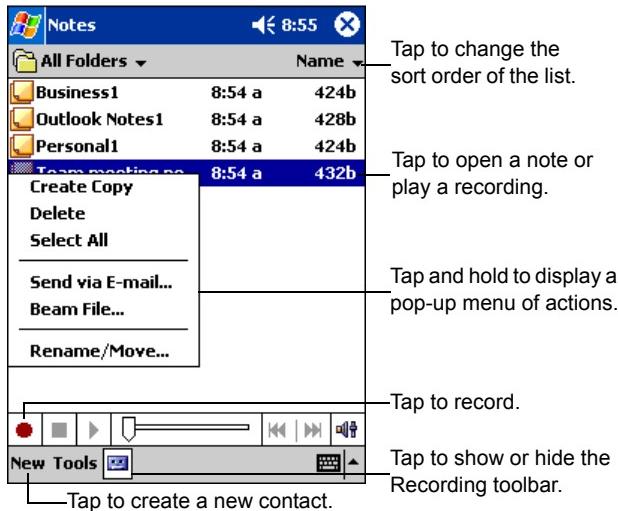


Figure 5-10. Notes Application

To create a note:

1. Tap *New*.
2. Create your note by writing, drawing, typing, or recording. For more information about using the input panel, writing and drawing on the screen, and creating recordings, see [Chapter 2, Operating the Terminal](#).

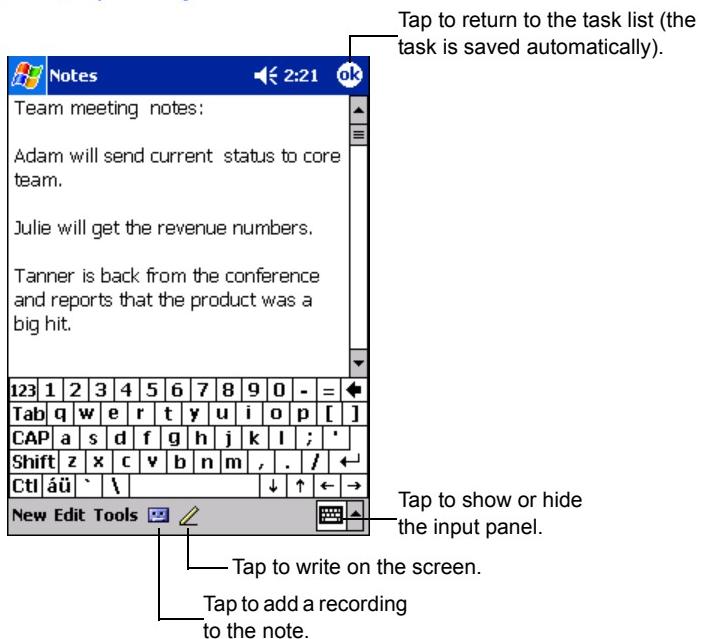
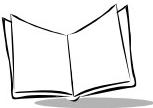


Figure 5-11. Creating a Note



Inbox

Use Inbox to send and receive e-mail messages in the following ways:

- Synchronize e-mail messages with Microsoft Exchange or Outlook on your host computer.
- Send and receive e-mail messages by connecting directly to an e-mail server through an Internet service provider (ISP) or a network.

Synchronizing E-mail Messages

To synchronize e-mail messages, first enable Inbox synchronization in ActiveSync options. For information on enabling Inbox synchronization, see ActiveSync Help on the host computer.

During synchronization:

- E-mail messages are copied from the Inbox folder of Exchange or Outlook on your host computer to the ActiveSync folder on your terminal. By default, you receive messages from the last 3 days only, the first 100 lines of each message, and file attachments of less than 100 KB in size.
- E-mail messages in the Outbox folder on your terminal are transferred to Exchange or Outlook, then sent from those programs.
- E-mail messages in subfolders must be selected in ActiveSync on your host computer to be transferred.

Note: You can also synchronize e-mail messages with your host computer from a remote location. For more information, see [Chapter 4, Communications](#).

Connecting Directly to an E-mail Server

You can also send and receive e-mail messages by connecting to an e-mail server using a modem or network card connected to your terminal. You'll need to set up a remote connection to a network or an ISP, and a connection to your e-mail server. For more information, see [Chapter 8, Connections](#).

When you connect to the e-mail server, new messages are downloaded to the terminal Inbox folder, messages in the terminal Outbox folder are sent, and messages that were deleted on the e-mail server are removed from the terminal Inbox.

Messages that you receive directly from an e-mail server are linked to your e-mail server rather than your host computer. When you delete a message on your terminal, it's also deleted from the e-mail server the next time you connect.

You can work online or offline. When working online, you read and respond to messages while connected to the e-mail server. Messages are sent as soon as you tap *Send*, which saves space on your terminal.

When working offline, once you've downloaded new message headers or partial messages, you can disconnect from the e-mail server, then decide which messages to download completely. The next time you connect, Inbox downloads the complete messages you've marked for retrieval and sends the messages you've created.

Using the Message List

Messages you receive display in the message list. By default, the most recently received messages are listed first.

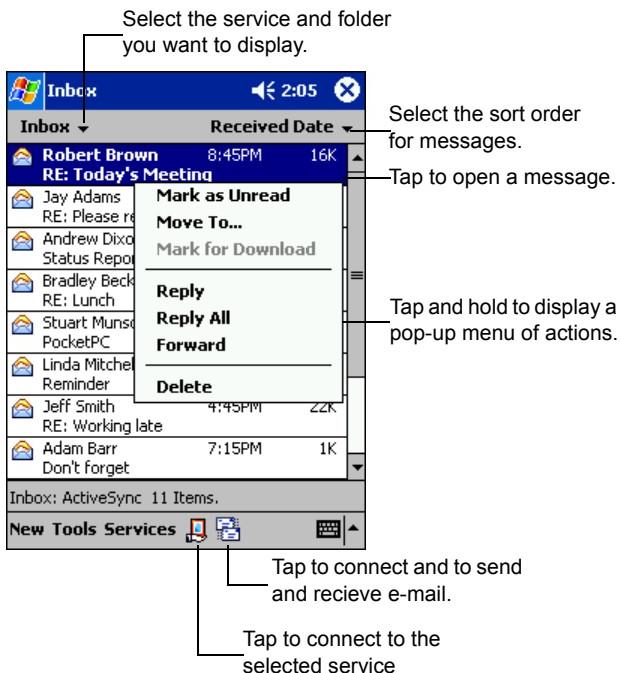


Figure 5-12. Inbox Application



When you receive a message, tap it in the list to open it. Unread messages display in bold.

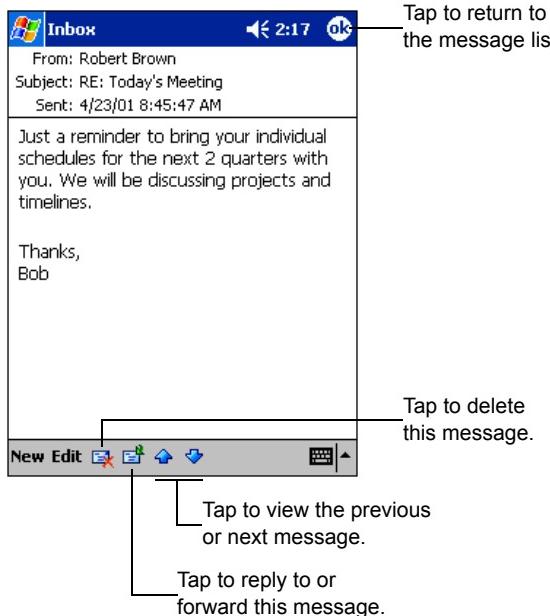


Figure 5-13. Viewing a Message

When you connect to your e-mail server or synchronize with your host computer, Inbox downloads by default only messages from the last 5 days, the first 100 lines of each new message, and file attachments of less than 100 KB in size. The original messages remain on the e-mail server or your host computer.

You can mark the messages that you want to retrieve completely the next time you synchronize or connect to your e-mail server. In the message list, tap and hold the message you want to retrieve. On the pop-up menu, tap *Mark for Download*. The icons in the Inbox message list indicates message status.

You specify your downloading preferences when you set up the service or select your synchronization options. You can change them at any time:

- Change options for Inbox synchronization using ActiveSync options. For more information, see ActiveSync Help.

- Change options for direct e-mail server connections in **Inbox** on your terminal. Tap **Tools - Options**. On the **Service** tab, tap the service you want to change. Tap and hold the service and select **Delete** to remove it.

Creating E-mail Messages

To create an e-mail message:

1. Tap *New*.
 2. In the **To** field, enter an e-mail or SMS address of one or more recipients, separating each with a semicolon, or select a name from the contact list by tapping the **Address Book** button. All e-mail addresses entered in the e-mail fields in Contacts appear in the Address Book.

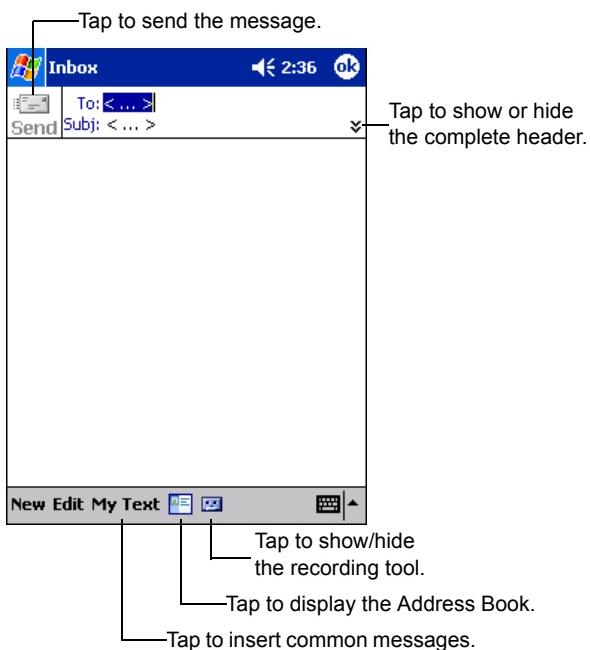
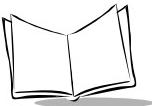


Figure 5-14. Creating a Message

3. Enter your message. To enter preset or frequently used messages, tap *My Text* and select a message.
 4. Tap *Send* when you're finished. If you're working offline, the message is transferred to the Outbox folder and sent the next time you synchronize.



If you are sending an SMS message and want to know if it was received, tap *Edit - Options*, and select *Request SMS text message delivery notification* before sending the message.

Managing E-mail Messages and Folders

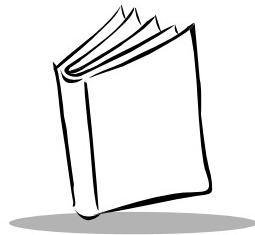
By default, messages are displayed in one of five folders for each service you've created: Inbox, Deleted Items, Drafts, Outbox, and Sent Items. The Deleted Items folder contains messages that have been deleted on the terminal. The behavior of the Deleted and Sent Items folders depends on the options you selected. In the message list, tap *Tools - Options*. On the *Message* tab, select your options.

To organize messages into additional folders, tap *Tools - Manage Folders* to create new folders. To move a message to another folder, in the message list, tap and hold the message, then tap *Move to* on the pop-up menu.

Folder Behavior with ActiveSync and Direct Connection to Server

The behavior of the folders you create depends on whether you are using ActiveSync, SMS, POP3, or IMAP4.

- If you use ActiveSync, e-mail messages in the Inbox folder in Outlook are automatically synchronized with your terminal. You can select to synchronize additional folders by designating them for ActiveSync. The folders you create and the messages you move are mirrored on the server. For example, if you move two messages from the Inbox folder to a folder named Family, and you have designated Family for synchronization, the server creates a copy of the Family folder and copies the messages into that folder. You can then read the messages while away from your host computer.
- If you use SMS, messages are stored in the Inbox folder.
- If you use POP3 and you move e-mail messages to a folder you created, the link is broken between the messages on your terminal and their copies on the mail server. The next time you connect, the mail server notes the messages missing from the terminal Inbox and deletes them from the server. This prevents you from having duplicate copies of a message, but it also means that you no longer have access to messages moved to folders created from anywhere except the terminal.
- If you use IMAP4, the folders you create and the e-mail messages you move are mirrored on the server. Therefore, messages are available to you anytime you connect to your mail server, whether it is from your terminal or host computer. This synchronization of folders occurs whenever you connect to your mail server, create new folders, or rename/delete folders when connected.

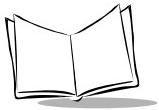


Chapter 6

Companion Programs

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Introduction

The terminal contains the companion programs Microsoft Pocket Word, Microsoft Pocket Excel, MSN® Messenger, Windows Media Player and Microsoft Reader. To select a companion program, tap *Start - Programs*, then the program name.

Pocket Word

Pocket Word works with Microsoft Word on your host computer to give you access to copies of your documents. You can create new documents on your terminal, or copy documents from your host computer to your terminal. Synchronize documents between your host computer and your terminal so that you have the most up-to-date information in both locations.

To create a new document in Pocket Word, such as a letter, meeting minutes, or a trip report, tap *Start - Programs - Pocket Word - New*. A blank document appears. Or, if you've selected a template for new documents in the *Options* dialog box, that template appears with appropriate formatting applied. You can open only one document at a time; when you open a second document, you'll be asked to save the first. You can save a document in a variety of formats, including Word (.doc), Pocket Word (.psw), Rich Text Format (.rtf), and Plain Text (.txt).



Pocket Word contains a list of the files stored on your device. Tap a file in the list to open it. To delete, make copies of, or send a file, tap and hold a file in the list. Then, select the appropriate action on the pop-up menu.

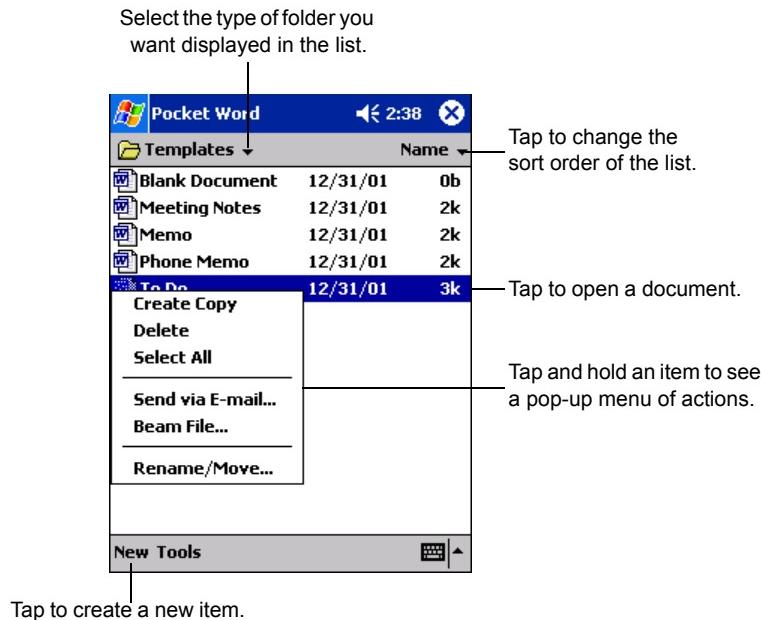


Figure 6-1. Using Pocket Word

You can enter information in Pocket Word in one of four modes (writing, drawing, typing, and recording) displayed on the *View* menu. Tap the *Show/Hide Toolbar* button on the command bar to show or hide each mode's toolbar.

To change the zoom magnification, tap *View - Zoom*. Select the percentage. Select a higher percentage to enter text and a lower one to see more of your document.

If you're opening a Word document created on a host computer, select *Wrap to Window* on the *View* menu to see the entire document.

Typing Mode

Use the input panel to enter typed text into a document. See [Entering Information](#) on page 2-11 for more information.

To format or edit text, select the text using your stylus instead of the mouse to drag across the text. To search a document for the text you want, tap *Edit - Find/Replace*.

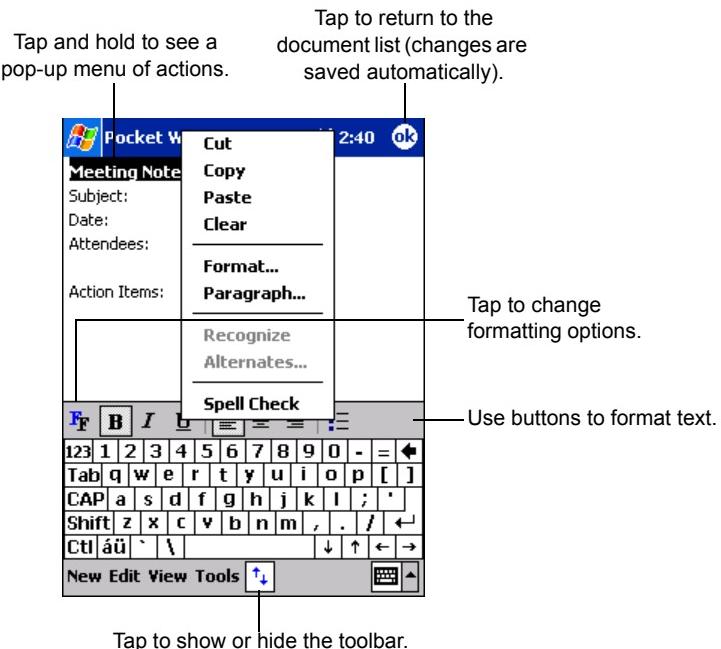
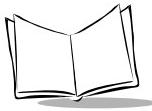


Figure 6-2. Formatting Text



Writing Mode

In writing mode, use your stylus to write directly on the screen. Ruled lines are displayed as a guide, and the zoom magnification increases to allow you to write more easily. For more information, see *Writing on the Screen* on page 2-14.

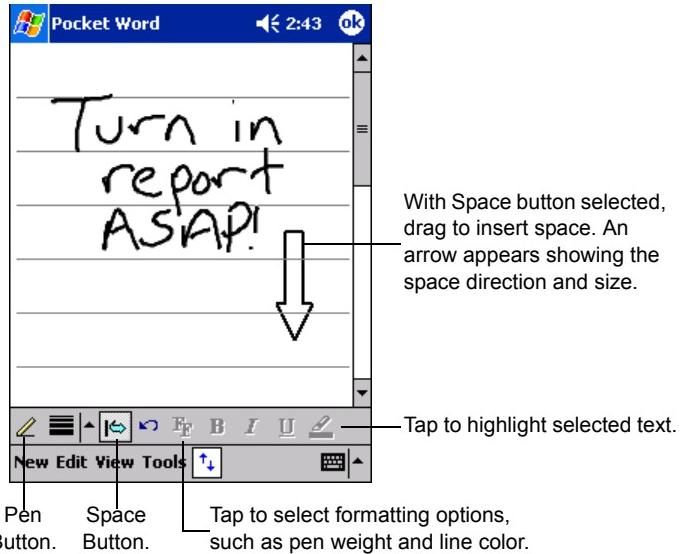


Figure 6-3. Writing on the Screen in Pocket Word

If you cross three ruled lines in a single stylus stroke, the writing becomes a drawing, and can be edited and manipulated as described in the following section.

Written words are converted to graphics (metafiles) when a Pocket Word document is converted to a Word document on your host computer.

Drawing Mode

In drawing mode, use your stylus to draw on the screen. Gridlines appear as a guide. When you lift your stylus after the first stroke, a drawing box indicates the boundaries of the

drawing. Every subsequent stroke within or touching the drawing box becomes part of the drawing. For more information, see [Drawing on the Screen](#) on page 2-18.

Select Shape on the pop-up menu to convert objects to proper shapes.

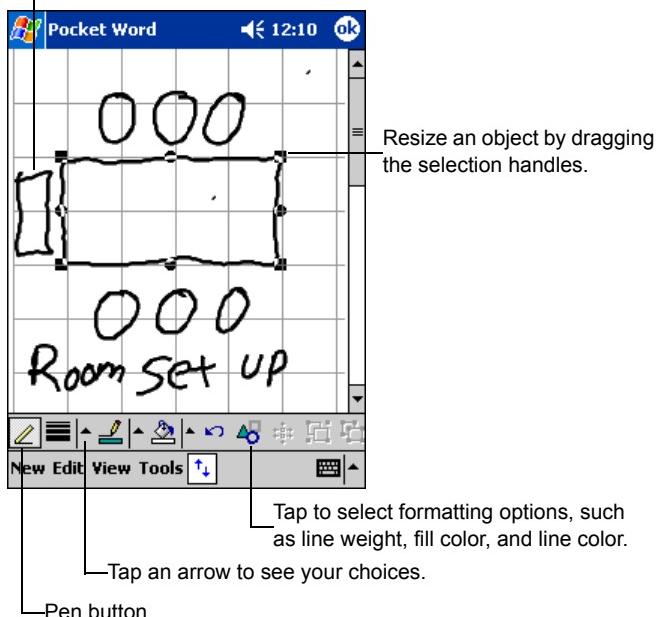
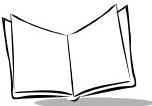


Figure 6-4. Drawing on the Screen in Pocket Word

Recording Mode

In recording mode, you may embed a recording into your document. Recordings are saved as .wav files. For more information, see [Recording a Message](#) on page 2-19.

For more information on using Pocket Word, tap *Start - Help*.



Pocket Excel

Pocket Excel works with Microsoft Excel on your host computer to provide easy access to copies of your workbooks. You can create new workbooks on your terminal, or copy workbooks from your host computer to your terminal. Synchronize workbooks between your host computer and your terminal so you have up-to-date content in both locations.

To create a new workbook in Pocket Excel, such as an expense report or mileage log, tap *Start - Programs - Pocket Excel - New*. A blank workbook appears. Or, if you've selected a template for new workbooks in the *Options* dialog box, that template appears with appropriate text and formatting already provided. You can open only one workbook at a time; when you open a second workbook, you'll be asked to save the first. You can save a workbook in a variety of formats, including Pocket Excel (.pxl) and Excel (.xls).

Pocket Excel lists the files stored on your terminal. Tap a file in the list to open it. To delete, make copies of, or send a file, tap and hold a file in the list, then select the appropriate action from the pop-up menu.

Pocket Excel provides fundamental spreadsheet tools, such as formulas, functions, sorting, and filtering. To display the toolbar, tap *View - Toolbar*.

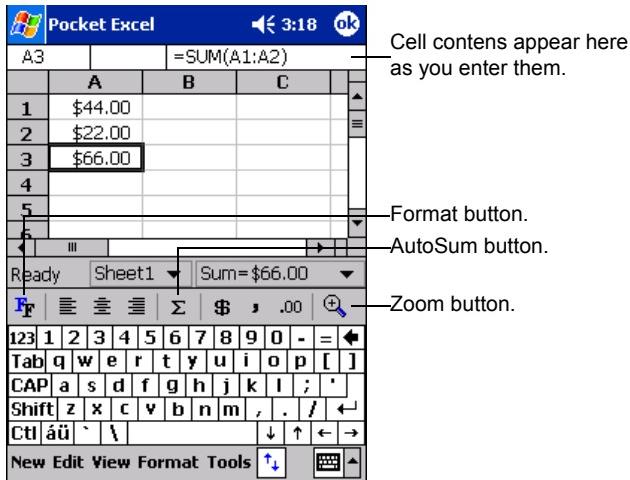


Figure 6-5. Using Pocket Excel

If your workbook contains sensitive information, you can protect it with a password. Open the workbook, tap *Edit - Password*. Every time you open the workbook, you must enter the password, so choose one easy for you to remember but hard for others to guess.

Tips for Working in Pocket Excel

When working in large worksheets in Pocket Excel:

- View in full-screen mode to see as much of your worksheet as possible. Tap *View - Full Screen*. To exit full-screen mode, tap *Restore*.
- Show and hide window elements. Tap *View*, then the elements you want to show or hide.
- Freeze panes on a worksheet. First select the cell where you want to freeze panes. Tap *View - Freeze Panes*. You may want to freeze the top and leftmost panes in a worksheet to keep row and column labels visible as you scroll through a sheet.
- Split panes to view different areas of a large worksheet. Tap *View - Split*. Drag the split bar to where you want it. To remove the split, tap *View - Remove Split*.
- Show and hide rows and columns. To hide a row or column, select a cell in that row or column. Tap *Format - Row or Column - Hide*. To show a hidden row or column, tap *Tools - Go To*, then type a reference that is in the hidden row or column. Tap *Format - Row or Column - Unhide*.

For more information on using Pocket Excel, tap *Start - Help*.

MSN® Messenger

With the MSN Messenger instant messaging program on your terminal you can:

- see who is online
- send and receive instant messages
- have instant message conversations with groups of contacts.

To use MSN Messenger, you need a Microsoft Passport™ account or a Microsoft Exchange e-mail account. You need a Passport to use MSN Messenger Service. If you have a Hotmail® or MSN account, you already have a Passport. Once you have either a Microsoft Passport or a Microsoft Exchange account, you can set up your account.

To switch to MSN Messenger, tap *Start - Programs - MSN Messenger*.



Setting Up Your Account

Before you can connect, set up the Passport or Exchange account and sign in:

1. Tap *Tools - Options*.
2. In the *Accounts* tab, enter your Passport or Exchange account information.
3. Tap the sign-in screen and enter your e-mail address and password.

If you use MSN Messenger on your host computer, your contacts automatically appear on your terminal.

Working with Contacts

The MSN Messenger window is divided into Online and Not Online categories. From this view, while connected, you can chat, send e-mail, block the contact from chatting with you, or delete contacts from your list using the pop-up menu.

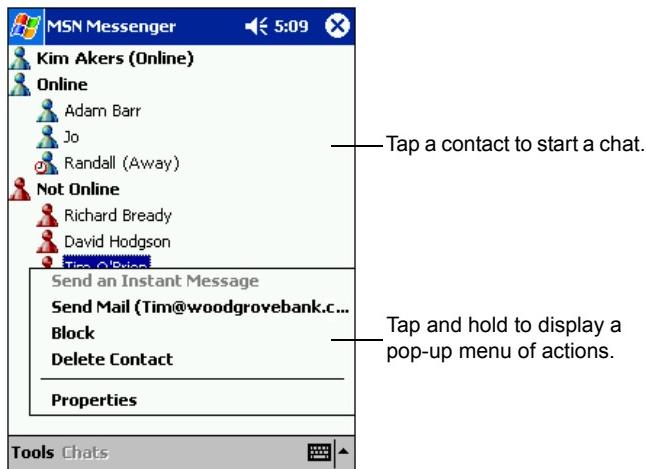


Figure 6-6. MSN Messenger Contacts

Note: To see others online without being seen, tap Tools - My Status - Appear Offline. You appear offline but remain on the blocked contact's list.

To unblock a contact, tap and hold the contact, then tap Unblock on the pop-up menu.

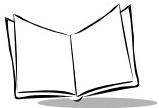
Chatting with Contacts

Tap a contact name to open a chat window. Enter your message in the text entry area at the bottom of the screen, or tap *My Text* to enter a preset message, and tap *Send*. To invite another contact to a multi-user chat, tap *Tools - Invite* and tap the contact you want to invite.



Figure 6-7. Sending a Message

To switch back to the main window without closing a chat, tap the *Contacts* button. To revert back to your chat window, tap *Chats* and select the person you were chatting with.



To know if the contact you are chatting with is responding, look for the message under the text entry area.

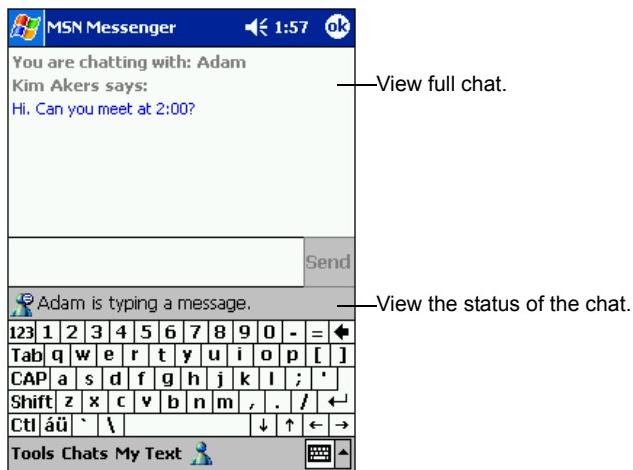


Figure 6-8. Receiving a Message

For more information on using MSN Messenger, tap *Start - Help*.

Windows Media Player

With Windows Media Player on your terminal you can play digital audio and video files that are stored on your terminal. To switch to Windows Media Player, tap *Start - Programs - MSN Messenger*.



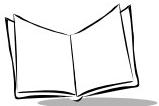
Figure 6-9. Using Windows Media Player

Use your host computer to copy digital audio and video files to your terminal. Your terminal can play Windows Media and MP3 files.

For more information on using Windows Media Player, tap *Start - Help*.

Miscrsoft Reader

Use Microsoft Reader to read eBooks on your terminal. Download books to your host computer from your favorite eBook Web site. Then, use ActiveSync to copy the book files to your terminal. The books appear in the Reader Library, where you can tap them in the list to open them.



Each book consists of a cover page, an optional table of contents, and the pages of the book. You can:

- Page through the book by using the Up/Down control on your device or by tapping the page number on each page.
- Annotate the book with highlighting, bookmarks, notes, and drawings.
- Search for text and look up definitions for words.

To switch to Microsoft Reader, tap *Start - Programs - Microsoft Reader*.

Getting Books on Your Device

You can download book files from the Web. Just visit your favorite eBook retailer and follow the instructions to download the book files. Use ActiveSync to download the files from your host computer to your terminal as described in the Read Me file in the MSReader folder.

Using the Library

The Library is your Reader home page; it displays a list of all books stored on your terminal. To open the Library:

1. On the Reader command bar, tap Library.
2. On a book page, tap the book title, and then tap Library on the pop-up menu.
3. To open a book, tap its title in the Library list.

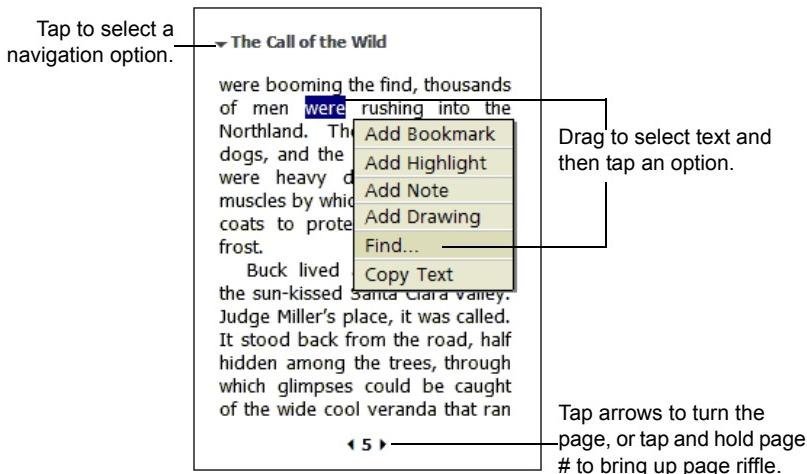


Reading a Book

Each book consists of a cover page, an optional table of contents, and the pages of the book. Navigation options are listed in the bottom portion of the cover page.

The first time you open a book, you'll probably want to go to the first page or to the table of contents, if there is one. Subsequently, whenever you open the book, you'll be automatically taken to the last page read.

In addition to the text, each book page includes a page number and book title.

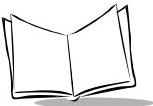


You can also page through a book using the Up/Down arrow keys on the keyboard of your terminal.

Using Reader Features

Reading a book electronically gives you several options not available with paper books. These options are available from any book page.

- Select text by dragging across the text on the page. Then, tap an option on the pop-up menu, as described here:
 - Search for Text. Find text in a book by tapping *Find* on the pop-up menu. Enter the word you want to search for, and tap the desired Find option. Reader highlights found text on the page. To close Find, tap outside the box. To return to your original page, tap the title and then tap *Return* on the pop-up menu.
 - Copy Text. You can copy text from books that support this feature into any



program that accepts text. On a book page, select the text you want to copy. Then, tap *Copy Text* on the pop-up menu. The text can be pasted into the program of your choice.

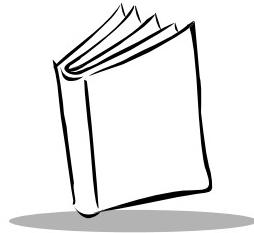
- Bookmarks. When you add a bookmark to a book, a color-coded bookmark icon appears in the right margin. You can add multiple bookmarks to a book. Then, from anywhere in the book, tap the bookmark icon to go to the bookmarked page.
- Highlights. When you highlight text, it appears with a colored background.
- Notes. When you attach a note to text, you enter the text in a note pad that appears on top of the book page. A Note icon will display in the left margin. To show or hide the note, tap the icon.
- Drawings. When you add a drawing, a Drawing icon appears in the bottom-left corner of the page, and drawing tools appear across the bottom of the page. Draw by dragging your stylus.
- To see a list of a book's annotations, including bookmarks, highlights, text notes, and drawings, tap *Annotations Index* on the book's cover page. You can tap an entry in the list to go to the annotated page.

Removing a Book

When you finish reading a book, you can delete it to conserve space on your terminal. If a copy of the book is stored on your host computer, you can download it again at any time.

To remove a book from your device, tap and hold the title in the Library list, and then tap *Delete* on the pop-up menu.

For more information on using Microsoft Reader, tap *Start - Help*.

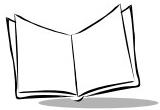


Chapter 7

Pocket Internet Explorer

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PDT 8000 Series Product Reference Guide

Introduction

With Microsoft Pocket Internet Explorer, you can view Web or WAP pages in the following ways:

- During synchronization with your host computer, download your favorite links and mobile favorites stored in the Mobile Favorites subfolder in Internet Explorer on the host computer.
- Connect to an Internet service provider (ISP) or network and browse the Web. First create the connection (see [Chapter 4, Communications](#)).

To select Pocket Internet Explorer, tap *Start - Internet Explorer*.

Mobile Favorites

Items stored in the Mobile Favorites subfolder in the Favorites folder in Internet Explorer on your host computer are synchronized with your terminal. This folder was created automatically when you installed ActiveSync.

Favorite Links

Synchronization updates the list of favorite links both in the Mobile Favorites folder on your host computer and in Pocket Internet Explorer on your terminal. Unless you mark the favorite link as a mobile favorite, only the link is downloaded to your terminal; you must connect to your ISP or network to view the content. For more information on synchronization, see ActiveSync Help on the host computer.

Creating Mobile Favorites

If you are using Microsoft Internet Explorer 5 or later on your host computer, you can download mobile favorites. Synchronizing mobile favorites downloads Web content to your terminal so you can view Web pages while disconnected from your ISP and host computer.

Use the Internet Explorer plug-in installed with ActiveSync to create mobile favorites:

1. In Internet Explorer on your host computer, click *Tools*, then *Create Mobile Favorite*.
2. To change the link name, enter a new name in the *Name* box.
3. If desired, select a desired update schedule in *Update*.



4. Click OK. Internet Explorer downloads the latest version of the Web page to your host computer.
5. To download the pages linked to the mobile favorite you just created, in Internet Explorer on the host computer, right-click the mobile favorite, then click *Properties*. On the *Download* tab, specify the number of links deep you want to download. To conserve terminal memory, only go one level deep.
6. Synchronize your terminal and host computer. Mobile favorites stored in the Mobile Favorites folder in Internet Explorer are downloaded to your terminal.

If you did not specify an update schedule in step 3, you must manually download content to keep the information updated on your host computer and terminal.

Before synchronizing, in Internet Explorer on your host computer, click *Tools - Synchronize*. Note the last time content was downloaded to the host computer; if necessary, manually download content.

You can add a button to the Internet Explorer toolbar for creating mobile favorites. In Internet Explorer on your host computer, click *View - Toolbars - Customize*.

Saving Memory on your Terminal

Mobile favorites take up storage memory on your terminal. To minimize the amount of memory used:

- In the settings for the Favorites information type in ActiveSync options, turn off pictures and sounds or stop some mobile favorites from downloading. For more information, see ActiveSync Help.
- Limit the number of downloaded linked pages. In Internet Explorer on the host computer, right-click the mobile favorite you want to change, then select *Properties*. On the *Download* tab, specify 0 or 1 for the number of linked pages to download.

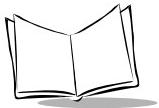
Using AvantGo Channels

AvantGo is a free interactive service that gives you access to personalized content and thousands of popular Web sites. Subscribe to AvantGo channels directly from your terminal, then synchronize with your host computer, or connect to the Internet to download the content. For more information, visit the AvantGo Web site.

To sign up for AvantGo:

1. In ActiveSync options on the host computer, turn on synchronization for the AvantGo information type.
2. In Pocket Internet Explorer on your terminal, tap the Favorites button to display your list of favorites.
3. Tap the *AvantGo Channels* link.
4. Tap the Activate button.
5. Follow the directions on the screen. You must synchronize your terminal with your host computer, then tap the My Channels button to complete setup.

When synchronization is complete, tap the *AvantGo Channels* link in your list of favorites to see a few of the most popular channels. To add or remove channels, tap the *Add* or *Remove* link.



Using Pocket Internet Explorer

With Pocket Internet Explorer, you can browse mobile favorites and channels downloaded to your terminal without connecting to the Internet. You can also connect to the Internet through an ISP or a network connection and browse the Web.

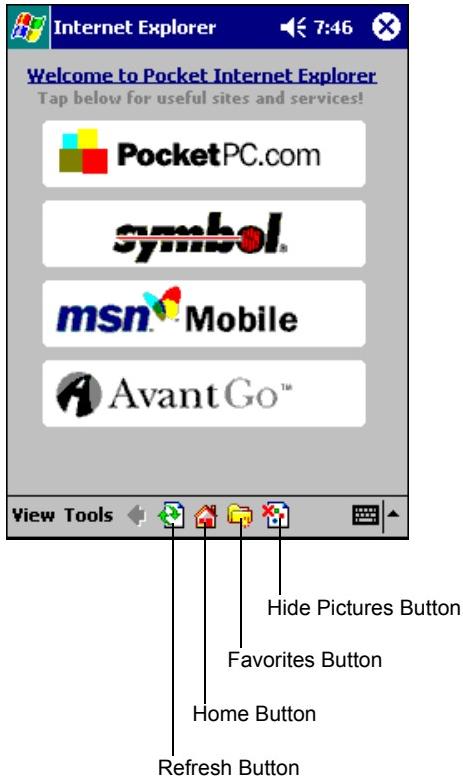


Figure 7-1. Pocket Internet Explorer

To view mobile favorites and channels, tap the Favorites button to display your list of favorites, then tap the page you want to view.

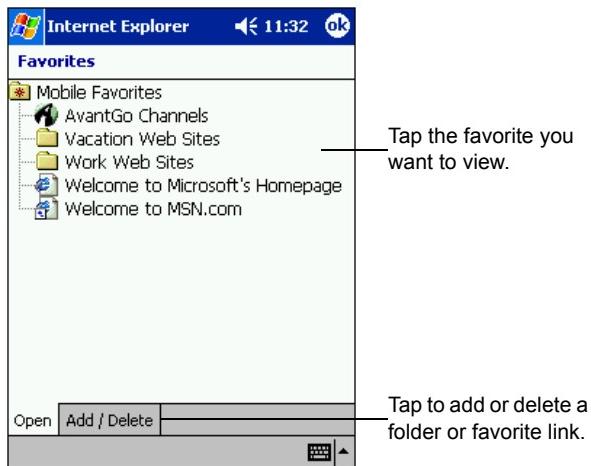
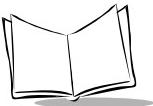


Figure 7-2. Mobile Favorites

You'll see the page that was downloaded the last time you synchronized with your host computer. If the page is not on your terminal, the favorite is dimmed. Synchronize with your host computer again to download the page to your terminal, or connect to the Internet to view the page.

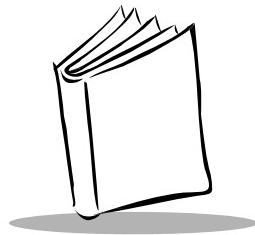


Browsing the Web

1. Connect to your ISP or network using Connections; see [Chapter 8, Connections](#).
2. Once connected, go to a specific Web page in one of the following ways:
 - Tap the Favorites button, then tap the favorite you want to view.
 - Tap *View - Address Bar*. In the address bar at the top of the screen, enter the Web address and tap *Go*. Tap the arrow to choose from previously entered addresses.
3. To end the connection, tap *Tools - Disconnect*.

Note: If you select Pocket Internet Explorer before setting up the network connections, a screen may appear allowing you to proceed to the connection settings screen. After you select your settings, you return to Pocket Internet Explorer.

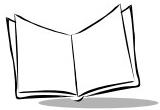
To add a favorite link while using the terminal, go to the Web page you want to add, tap and hold on the page, and tap Add to Favorites.



Chapter 8 *Connections*

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Transferring Items Using Infrared	8-4
Connecting Directly to an E-mail Server	8-5
Setting Up an E-mail Service	8-5
Disconnecting	8-5
Getting Help Connecting	8-6

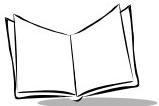


PDT 8000 Series Product Reference Guide

Introduction

Your terminal can exchange information with other Windows-powered devices via the cradle, or through the following connection options:

- Use the infrared (IR) port to send and receive files between two terminals. See [Transferring Items Using Infrared](#) on page 8-4.
- Connect to a network to send and receive e-mail messages using Inbox, view Web or WAP pages using Pocket Internet Explorer, and synchronize with your host computer. See [Communication Setup](#) on page 4-5.
- Connect to your host computer to synchronize remotely. See [Synchronizing Data](#) on page 4-11.
- Connect to your Internet service provider (ISP) to send and receive e-mail messages using Inbox and view Web or WAP pages using Pocket Internet Explorer. See [Connecting to the Internet](#) on page 4-13. The communication software for creating an ISP connection is already installed on your terminal. Your service provider provides software needed to install other services, such as paging and fax services.
- Wirelessly via Spectrum24 LAN. See Chapter 9, [Spectrum24 Network Configuration](#).



Transferring Items Using Infrared

Using infrared (IR), you can send and receive information, such as contacts and appointments, between two Windows-powered devices.

To send information:

1. Open the program where you created the item you want to send and locate the item in the list.
2. Align the IR ports so that they are unobstructed and within close range.
3. Tap and hold the item, and tap *Beam [item]* on the pop-up menu.

Note: You can also send items, but not folders, from File Explorer. Tap and hold the item, then tap Beam File on the pop-up menu.

To receive information, align the IR ports so that they are unobstructed and within close range. When information is sent from the other device, your terminal receives it automatically.

Note: In order for IR receive to work automatically, you must first check the Receive all incoming beams and select discoverable mode checkbox in Start - Settings - Connections - Beam. If this box is not checked, select Start - Programs - Infrared Receive before receiving data from another device.

Connecting Directly to an E-mail Server

You can set up a connection to an e-mail server to send and receive e-mail messages using a modem or network connection and Inbox on your terminal.

Note: *The ISP or network must use a POP3 e-mail server and an SMTP gateway.*

You can use multiple e-mail services to receive your messages. For each e-mail service you intend to use, first set up and name the e-mail service. If you use the same service to connect to different mailboxes, set up and name each mailbox connection.

Setting Up an E-mail Service

In Inbox on your terminal, tap *Services*, then *New Service*. Follow the instructions in the New Service wizard on the screen. For an explanation of a screen, tap *Start*, then *Help*.

When finished, tap *Services*, then *Connect* to connect to your e-mail server. For more information on using the Inbox program, see *Inbox* on page 5-14.

Disconnecting

Choose one of the following ways to disconnect:

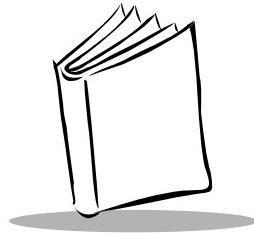
- When connected via dial-up or VPN, tap the Connection icon  on your navigation bar, then tap *End*.
- When connected via the cradle, remove your terminal from the cradle.
- When connected via a serial connection, disconnect the terminal and the host computer.
- When connected via Infrared, move the terminal away from the host computer.



Getting Help Connecting

See the following for more connection information:

- [*Inbox*](#) on page 5-14.
- Online Help on the terminal. Tap *Start*, then *Help*. Tap *View, All Installed Help*, then *Inbox* or *Connections*.
- ActiveSync Help on the host computer. In ActiveSync, click *Microsoft ActiveSync Help* on the *Help* menu.
- [*Maintenance and Troubleshooting*](#) on page 12-1.

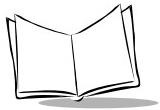


Chapter 9

Spectrum24 Network Configuration

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Configuring the PDT 8046 (11 MB Radio)	9-3
Network Adapters Properties	9-3
Using NICTT with the PDT 8046	9-5



PDT 8000 Series Product Reference Guide

Introduction

Wireless LANs allow PDT 8000 terminals to communicate wirelessly, and to send captured data “real time” to a host device. Before a terminal can be used on a Spectrum24 LAN your facility must be set up with the equipment required to run the wireless LAN and the terminal must be properly configured. Refer to the documentation which came with your access points for instructions on setting up the required hardware.

The PDT 8046 terminal Spectrum24 settings and NICTT settings configure and monitor the Spectrum24 connection.

Configuring the PDT 8046 (11 MB Radio)

Before the PDT 8046 can be used, it must be properly configured for the Spectrum24 Wireless LAN.

1. Tap *Start - Settings*.
2. Select *Network Adapters* from the *Connections* tab.
3. Select *Spectrum 24 802.11b*.

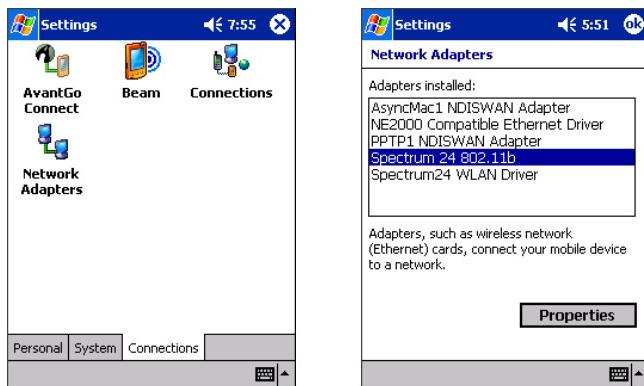
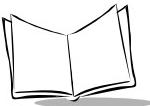


Figure 9-1. Network Adapters

Network Adapters Properties

Tap *Properties* to view the current adapter IP configuration settings. **DHCP** (Dynamic Host Configuration Protocol) obtains a leased IP address and network configuration information from a remote server. An access point sends out a DHCP request searching for a DHCP server to acquire the network configuration and firmware filenames.



Use the property pages to view and adjust the IP address, subnet, gateway, DNS, and WINS.

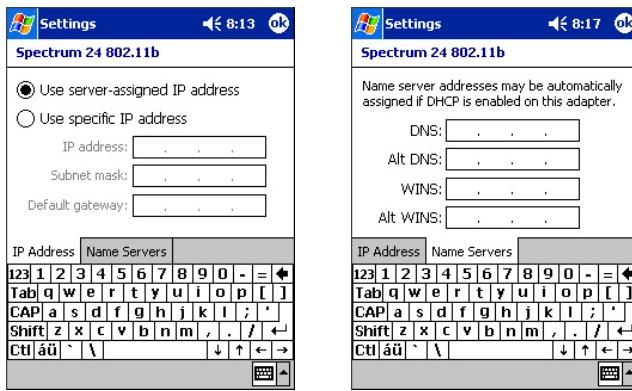


Figure 9-2. IP Network Adapter Property Pages

- **IP Address:** A 32-bit (max) value expressed as four decimal numbers from 0 to 255, separated by periods (e.g., 157.235.90.24) that the terminal uses to transmit and receive data. The IP address of the adapter is required to be in the same subnet as that of the access point for the devices to interoperate in Infrastructure mode.
- **Subnet Mask:** A 32-bit value expressed as four decimal numbers from 0 to 255, separated by periods (e.g., 255.255.0.0) which allows TCP/IP to determine the network ID portion of an IP address. Required in order for the subnet to exist. Its purpose is to *mask out* IP addresses that are not part of the subnet. The network administrator usually has the required subnet mask.
- **Gateway:** Used to connect to the corporate network. The network administrator usually has the IP address required for the default gateway.
- **DNS (Domain Name System):** The IP address of a server containing a database of host names and their associated IP addresses so that when a host name is used, it can be resolved into its IP address.
- **WINS (Windows Internet Name Service):** A NetBIOS Name Server that registers your NetBIOS names and resolves into IP addresses, similar to DNS.

Using NICTT with the PDT 8046

The NICTT (wireless LAN) icon located on the bottom of the terminal screen indicates terminal signal strength as shown below. Tap the NICTT icon to make changes to the network configuration, or view the status of your network connection.

Icon	Status
------	--------



Excellent signal strength



Very good signal strength



Good signal strength



Fair signal strength



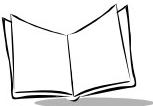
Poor signal strength



Out-of-network range (not associated)



Adapter not found



Mode Tab

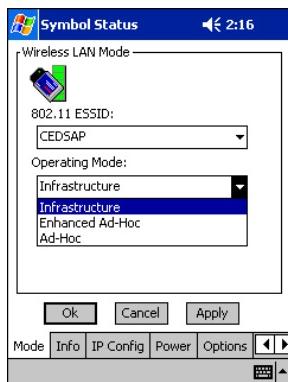


Figure 9-3. PDT 8046 NIC TT Properties - Mode Tab

The *Mode* tab in NIC TT configures the adapter's ESSID and operating mode.

- Use the *Operating Mode* drop-down menu to select one of the following operating modes for the terminal:
 - If you select *Infrastructure*, enter a 32-character maximum ESSID (802.11 Extended Service Set Identifier) in the *802.11 ESSID* field to identify the wireless local area network. This ESSID must match the access point ESSID for the adapter to communicate with the access point.
 - If you select *Enhanced Ad Hoc*, enter the channel number in the *Channel* field. The first adapter configured in the Ad Hoc network defines the channel number used in the Ad Hoc network. Each adapter is required to use the same channel to transmit and receive data to its peers.

Check the *Send long preamble headers* checkbox if the other devices in your network are using a long preamble. Devices using Ad Hoc mode must use the same preamble setting to interoperate. The adapter uses a long preamble heading by default.

Note that this is a Symbol Technologies operating mode and only works with other Symbol adapters enabled in the same mode.

- If you select *Ad Hoc*, enter a 32-character maximum ESSID (802.11 Extended Service Set Identifier) in the *802.11 ESSID* field to identify the wireless local area network. This ESSID must match the ESSID of other devices using the Ad Hoc mode.

Enter the channel number in the *Channel* field. The first adapter configured in the Ad Hoc network defines the channel number used in the Ad Hoc network. Each adapter is required to use the same channel to transmit and receive data to its peers.

Check the *Send long preamble headers* checkbox if the other devices in your network are using a long preamble. Devices using Ad Hoc mode must use the same preamble setting to interoperate. The adapter uses a long preamble heading by default.

Info Tab

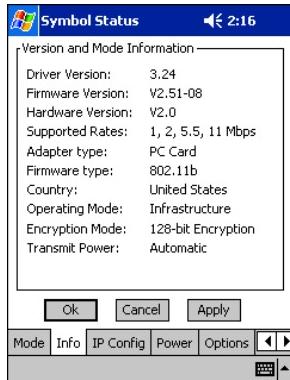


Figure 9-4. PDT 8046 NIC TT Properties - *Info* Tab

The *Info* tab in NIC TT provides information about the terminal, such as the version of the driver, adaptive firmware, and hardware. It also lists the current active settings for operating, encryption and transmit power modes. All the fields in the *Info* tab are read-only and cannot be configured.



IP Config Tab

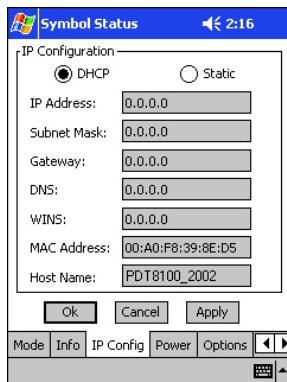


Figure 9-5. PDT 8046 NIC TT Properties - IP Config Tab

The *IP Config* tab allows you to adjust IP configuration settings.

- Select *DHCP* (Dynamic Host Configuration Protocol) to obtain a leased IP address and network configuration information from a remote server. DHCP is the default setting, and when selected, IP address fields are read only.
- Select *Static* to manually enter the following fields:
 - **IP Address:** A 32-bit (max) value expressed as four decimal numbers from 0 to 255, separated by periods (e.g., 157.235.90.24) that the terminal uses to transmit and receive data. The IP address of the adapter is required to be in the same subnet as that of the access point for the devices to interoperate in Infrastructure mode.
 - **Subnet Mask:** A 32-bit value expressed as four decimal numbers from 0 to 255, separated by periods (e.g., 255.255.0.0) which allows TCP/IP to determine the network ID portion of an IP address. Required in order for the subnet to exist. Its purpose is to *mask out* IP addresses that are not part of the subnet. The network administrator usually has the required subnet mask.
 - **Gateway:** Used to forward IP packets to and from a remote destination. See your network administrator for the IP address required for the default gateway.
 - **DNS (Domain Name System):** The IP address of a server containing a database of host names and their associated IP addresses so that when a host name is used, it can be resolved into its IP address.
 - **WINS (Windows Internet Name Service):** A NetBIOS Name Server that registers your NetBIOS names and resolves into IP addresses, similar to DNS.

- **MAC Address:** An IEEE 48-bit address the adapter is given at the factory which uniquely identifies the adapter at the physical layer level.
- **Host Name:** User-assigned host name.

Power Tab

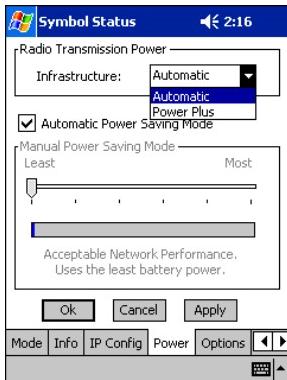
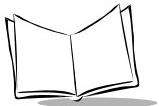


Figure 9-6. PDT 8046 NIC TT Properties - Power Tab

Select the *Power* tab to set Radio Transmission Power and a Power Saving Mode.

Adjusting the *Radio Transmission Power* level enables you to expand or confine the transmission area with respect to other wireless devices that may be operating nearby. Reducing a coverage area in high traffic areas improves transmission quality by reducing the noise in that coverage area.

- In Infrastructure mode, there are two transmission power options in the *Infrastructure* drop-down menu:
 - Select *Automatic* to use the power level defined by the access point. Automatic mode is the default mode for adapters operating in Infrastructure mode.
 - Select *Power Plus* to set the adapter transmission power one level higher than the level set for the access point.
- In Enhanced Ad Hoc or Ad Hoc mode, there are five transmission power options available in the drop-down menu:
 - Select *Maximum* power to set the adapter to the highest transmission power level. This is best suited for operation in highly reflective environments and areas where other devices could be operating nearby. Also use maximum power when attempting to communicate with devices at the outer edge of a coverage area.



- Choose 50%, 25% or 10% to set the transmit power level to that percentage of the maximum power level.
- Choose *Minimum* power to set the adapter to the lowest transmission power level. Use this level when communicating with other devices in very close proximity, or when little or no radio interference from other devices is expected.
- Check **Automatic Power Saving Mode** to switch to the Best Network Performance when the AC power supply is used.

When using the battery, select an appropriate setting between Best Network Performance and Acceptable Network Performance based on real-time analysis of the network usage. Automatic Power Saving Mode is the default setting and extends the operating time before the battery must be recharged.

- Uncheck **Automatic Power Saving Mode** to select *Manual Power Saving Mode*, which allows you to set the slider to a performance level suited to the intended operation. There are 6 settings ranging from the best network performance, which uses the most battery power, to acceptable network performance, which uses the least battery power.

Note: Power savings modes are not available in Enhanced Ad Hoc operating mode.

Options Tab

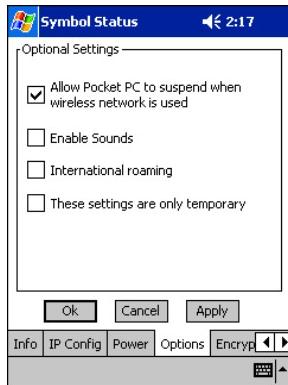


Figure 9-7. PDT 8146 NICTT Properties - Options Tab

Use the *Options* tab to enable or disable the suspend wireless network option and system sounds, and set temporary settings.

- Check the Allow Pocket PC to suspend when wireless network is used to allow the terminal to automatically turn off (suspend) operation based on user inactivity. This prevents battery drain. The terminal does not suspend when idle if you disable this option.
- Check Enable Sounds to issue a sound when performing a ping test and associating with an access point. This notifies you when a ping is completed and when a roam to an access point occurs.
- Check International Roaming to enable this setting, used in countries outside of the United States.
- Changes to settings you make using the Symbol Status are usually saved to the registry and used to initialize the adapter when it is inserted. Check These settings are only temporary to prevent your changes from being saved to the registry. If not checked, any value entered is saved in the registry.

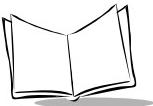
Encryption Tab



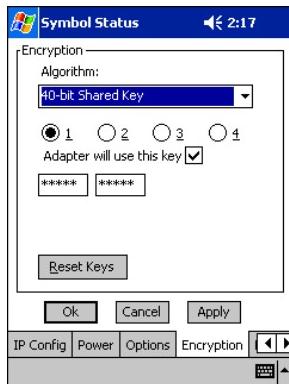
Figure 9-8. PDT 8046 NICTT Properties - Encryption Tab, Open System Selected

Use the *Encryption* tab in NICTT to control encryption options. This allows you to encrypt WLAN data packets to protect your data from inspection by systems that may intercept wireless data over the network.

- Select an *Encryption Algorithm* matching the security established in your network. The AP and the terminal's adapter must use the same encryption algorithm:
 - The *Open System* does not encrypt any of the data packets that travel over the WLAN, meaning the data packets transmitted by terminals or APs are not encrypted. Select this if no security is needed on the network.

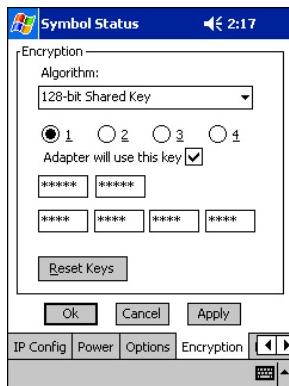


- The *40-bit Shared Key Algorithm* uses a 40-bit encryption key known by both the terminal and the AP to encrypt the data over the network.



**Figure 9-9. PDT 8046 NIC TT Properties -
Encryption Tab, 40-bit Shared Key Selected**

- The *128-bit Shared Key Algorithm* uses a 128-bit encryption key known by both the terminal and the AP to encrypt the data over the network. This option provides a higher level of security than the 40-bit encryption while maintaining an 11 Mbps data rate.



**Figure 9-10. PDT 8046 NIC TT Properties -
Encryption Tab, 128-bit Shared Key Selected**

- Select *Kerberos* if your network employs the Kerberos system. Enter the Key Distribution Center (KDC) and Realm values. The KDC is located on a server and maintains information about the access points and users it supports, and

also permits the transmission and receipt of data once the credentials of the user are verified. Enter the name of the realm that hosts the Kerberos KDC in the Realm field.

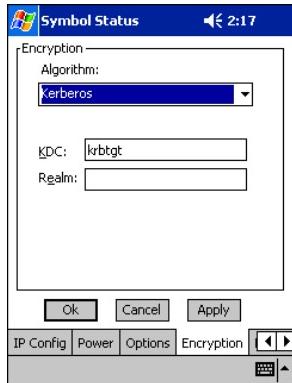


Figure 9-11. PDT 8046 NIC TT Properties - *Encryption* Tab, Kerberos Selected

Ping Tab

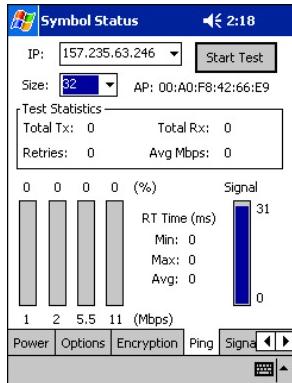
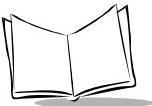


Figure 9-12. PDT 8046 NIC TT Properties - *Ping* Tab

Use the *Ping* tab to send and receive ICMP ping packets across the network to the specified IP address.

- Enter an IP address as a dotted string (e.g., 122.78.3.141).
- Select the size of packets sent from the *Size* drop-down menu.



- Select Start Test to begin the continuous ping test. Select Stop Test to terminate the ping test.
- The average mega-bits per second, signal strength, data rate currently in use, test statistics and round trip times are displayed for each test.
- The associated access point's MAC address is also displayed.
- The signal strength level and the data transmission rate are displayed in real-time bar graphs.

Signal Tab

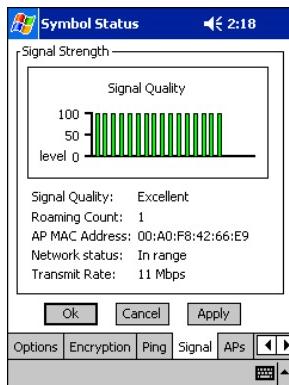


Figure 9-13. PDT 8046 NICTT Properties - **Signal** Tab

The *Signal* tab is only available in Infrastructure mode (selected on the *Mode* tab).

Use the *Signal* tab to display a real-time graph of the signal quality of the adapter to the associated access point, including the number of times the adapter has roamed to and from APs, the current data rate, and the network status. Signal quality indicates how well the adapter receives the transmitted signal of the associated access point.

APs Tab

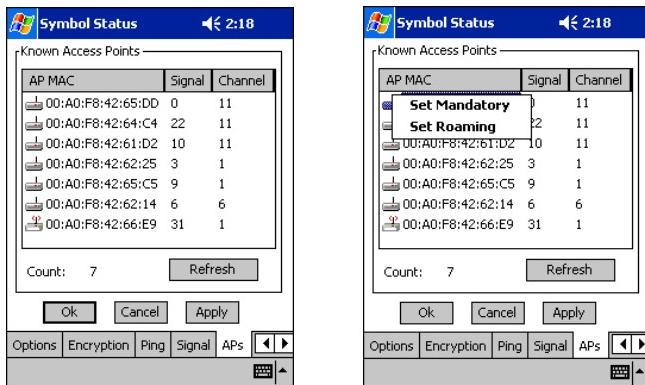


Figure 9-14. PDT 8046 NIC TT Properties - APs Tab

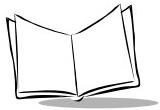
The *APs* tab is only available in Infrastructure mode (selected on the *Mode* tab).

Use the *APs* tab with the Infrastructure operating mode to view access points with the same ESSID as the adapter. View the AP MAC address, signal level and channel of known access points.

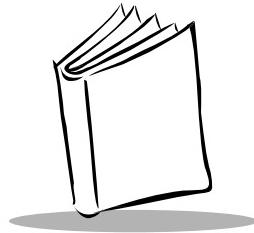
- The currently associated access point's icon includes a radio wave radiating from the antennae to indicate the associate status. Tap on an icon to display a menu:
 - Select *Set Mandatory* to prohibit the adapter from associating with the specified access point. The letter "m" displays on top of the access point's icon when this option is selected.
 - Select *Set Roaming* to allow the adapter to roam to this access point if it has a better signal quality.

These settings are temporary and are not saved to the registry.

- Tap the Refresh button to update the list of the known APs.



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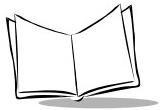


Chapter 10

Software Installation on Development PC

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Installing the SDK on the Development PC.....	10-4
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Installing Other Development Software	10-4



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Introduction

To develop applications to run on the terminal, the *Symbol Windows CE Software Developer's Kit (SDK)* is available. This SDK contains PDT 8000-specific software not available in the standard Microsoft Windows CE Platform SDK.

The minimum system configuration required to install the SDK is:

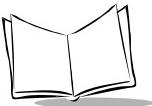
- IBM-compatible host computer with Pentium 150 MHz processor or higher
- Windows®98 second edition, or Windows® NT operating system version 4.0 with Service Pack 5 or later, or Microsoft Windows 2000 operating system
- 24MB RAM for Windows 98, 32 MB RAM for Windows NT
- 100MB available hard disk space
- CD-ROM drive
- One available serial port
- Mouse.

Also, be sure the drive you are installing to accepts long filenames (larger than the 8.3 filename convention).

Before You Install the SDK

Before you install the Symbol Windows CE SDK, install the following tools:

- Microsoft eMbedded Visual Tools 3.0
- Windows CE Platform SDK for Pocket PC
- Microsoft ActiveSync version 3.5.



Symbol Windows CE SDK

The SDK installation program loads the required Windows CE components on the development PC used to create the image files (via Terminal Configuration Manager) for download to the terminal.

The Symbol SDK includes:

- Symbol-provided files
- Printer drivers
- TCM scripts
- Sample code
- The *PDT 8000 Product Reference Guide* (p/n 72-58169-xx).

Installing the SDK on the Development PC

The Symbol SDK installs through Windows in the directory X:\SYMBOL WINDOWS CE SDK (where X is your local directory), and also installs files in the Windows CE Tools directory (generated by the CE Tool Kit).

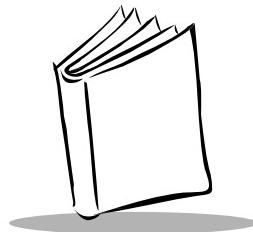
Installing the SDK

Download the SDK from the Symbol Development Web site www.devzone.symbol.com. Follow the installation prompts.

Once installation of the SDK is complete, use eMbedded Visual C++ or eMbedded Visual Basic to view the active Windows CE configuration, Microsoft Pocket PC, and display the directory in which the SDK is installed.

Installing Other Development Software

Developing applications for the terminal may require installing other development software such as application development environments on the development PC. Follow the installation instructions provided with this software.

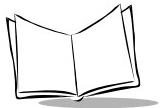


Chapter 11

Configuring the Terminal

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Introduction

This chapter describes the Terminal Configuration Manager (TCM), and how it is used to specify and load files into the flash memory of the terminal using the terminal's Initial Program Loader (IPL).

In TCM, you create a *script* that contains the information (commands to copy files) for building the image. TCM works with directory windows which display the directory structure of your script and the source directories, files, and scripts from which you pull components. You can open multiple scripts, drag and drop items from a drive/directory to the script, rename and delete files in the script, etc. Upon building the image, TCM adds all the files, directories, and scripts referenced in the script to the image.

The SDK includes a number of standard scripts and demos/samples for you to use as a base for creating your own scripts. These scripts can be found in the SYMSDK\TCMScripts directory.

Note: *Before you create a script to build a hex image, identify the files required (system files, drivers, applications, etc.) and locate the files' source directories to make the script building process easier.*

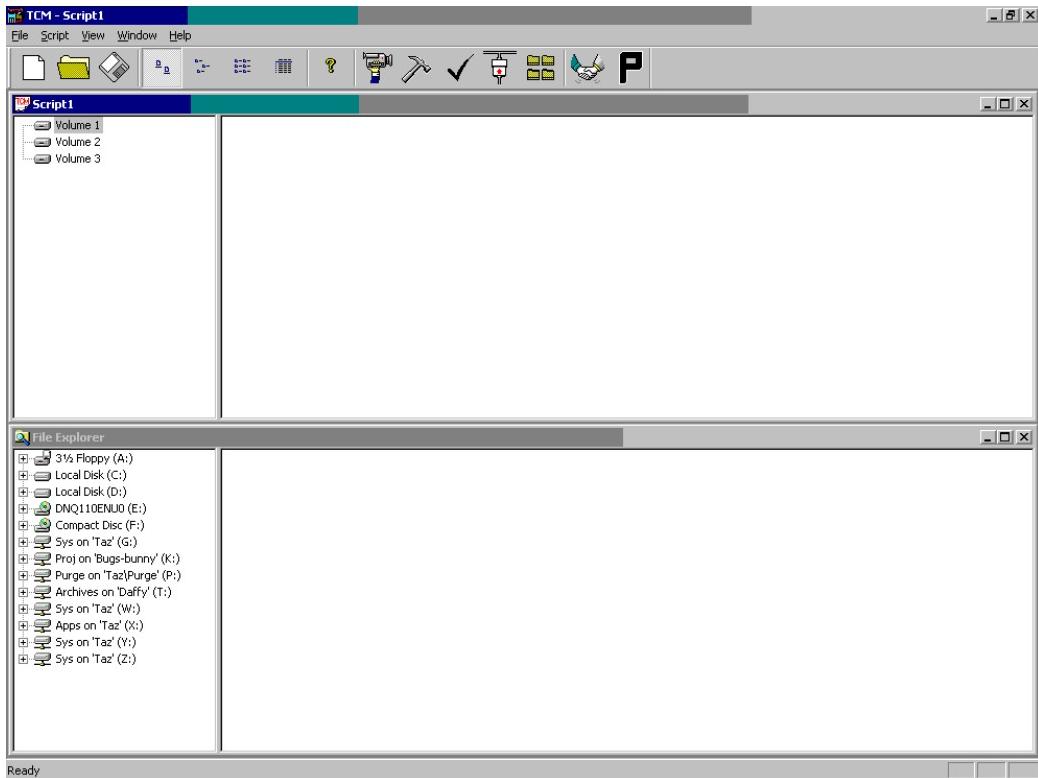
The required processes for building a hex image in TCM include:

- Starting TCM
- Defining script properties
- Creating or modifying a script
- Building the hex image
- Sending the hex image.



Starting Terminal Configuration Manager

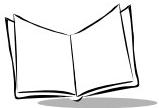
To start TCM, double click on the TCM icon in the SYMSDK group. The following screen appears, displaying two directory windows; Script1 and File Explorer. Each directory window is split; the left half (or *pane*) of the window displays the directory tree for the current drive, and the right half displays the directory contents for the current drive.



The following table lists the components of the TCM start-up screen.

Table 11-1. TCM Screen Components

Component	Description			
Script Window	<p>Associated with a script file containing the information to create a Flash Disk image. This window is the <i>target</i> window, or the primary TCM window in which you can create a script or change a script file's contents by copying, deleting, and renaming files and directories. More than one script window can be open at a time.</p> <p>The Script Window consists of two panes, the Directory Tree Pane on the left and the Directory Contents Pane on the right. Subordinate directories and files of each volume are listed in the Directory Contents Pane.</p>			
File Explorer	<p>A <i>read-only</i> source window for files and/or directories to include in the script being built.</p>			
Tool Bar	Contains the tools, illustrated below, for taking action on a script.			
		Create a new script file.		Check script for existing files.
		Open a script file.		Select the hex image to load.
		Save a script file.		Tile windows.
		View script properties.		Build and send the hex image to the terminal.
		Build a script.		Preferences.
		View large icons.		About TCM.
		View small icons.		View list.



Defining Script Properties

Before a script is created, the script properties must be defined. This defines the type of terminal, flash type, number of disks being created, and the memory configuration of each disk volume.

To define the script properties:

1. With TCM open, click on the Script Window to make it the active window.
2. Under the *Script* menu, select the *Properties* option.

OR

Click on  from the tool bar. The *Script Properties* window displays.



3. From the *Terminal* drop-down menu, select 8000-64M.
4. Verify that 40A-1F400Z is selected from the *Flash Type* drop-down menu.
5. From the *Disks* drop-down menu, select the number of disk volumes to be created.

Note: *The options available under the disks drop-down menu changes depending on the flash type. Some flash types only have one option for the number of disk volumes, others have two options.*

6. If you have selected three volumes under the *Disk* drop-down menu, you have the option to change the memory configuration of the second and third volumes. To do so, click on the up or down arrow for either of the volumes, until the memory configuration of each is set to the desired value. You will notice that as you change the values for one of the volumes, the other volume is automatically changed accordingly.
7. For each disk volume, determine the Read/Write access option.
8. The Script File Path displays the path of the selected script file.



Creating the Script for the Hex Image

On start-up, TCM displays the screen shown on page [11-4](#), with the Script1 window and File Explorer window.

The Script1 Window directory pane displays three volumes: Volume1, Volume2, and Volume3. Depending on the type of flash chip you have, the number of volumes may change. Files can be added to each of the volumes. With TCM, you can:

- Create a new script file or open an existing script
- Drag and drop existing files and directories to that script
- Save the script.

Each process is described in the sections that follow.

Open a New or Existing Script

Scripts are created in the Script Window. To open a new script:

- From the *File* menu, choose *New*, OR
- Click on  from the tool bar.

To open an existing script (e.g., a standard script provided in the SDK):

- From the *File* menu, choose *Open*. Navigate to the Symbol Windows CE SDK(*PDT8000*)\SymbolPlatforms\PDT80xx\TCMScripts directory and select the script file name, OR

- Click on  from the toolbar. Navigate to the Symbol Windows CE SDK(*PDT8000*)\SymbolPlatforms\PDT80xx\TCMScripts directory and select the script file name, OR
- Double click on an existing script in the Script Browser window.

Copy Components to the Script

To copy files or directories to the script being generated:

1. Click on the File Explorer Window to make it the active window.
2. Click on the source directory in the Directory Tree Pane. TCM displays the directory contents in the Contents Pane.

-
3. Click on the file(s) and/or directory in File Explorer.

Note: Optionally, use the standard Windows Shift+Left-click and Control+Left-click features to select multiple files and directories.

4. Drag and drop the selected file(s) and/or directory from File Explorer to the target directory in the Script Window,

OR

Click on the target directory and select the File Explorer Copy icon from the toolbar.

Save the Script

To save the changes to a new script:

1. From the *File* menu, choose *Save As*,

OR

On the toolbar, click on  .

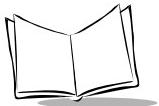
2. Enter the path and filename. TCM appends a .TCM extension to the script.
3. Choose the *OK* button.

Note: If you save an untitled script, TCM by default saves the script to the directory that the Script Browser is pointing to.

To save changes to an existing script:

- From the *File* menu, choose *Save*, OR
- On the toolbar, click  .

Note: If you open and make changes to an existing script, saving the changes writes over the existing script. If you wish to use an original or Symbol-supplied standard script as a base and save the changes in a new script, use *Save As* instead of *Save* after making the changes, and save to a different filename.



Building the Image

As part of the build, TCM performs a check on the script which verifies that all files referenced in the script exist. If the image is bootable, TCM verifies that the boot files are available.

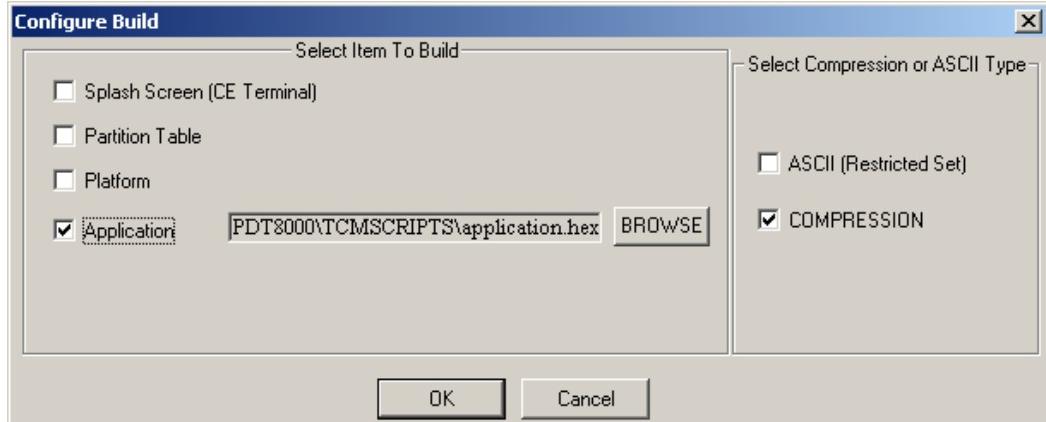
Note: *Performing a check is more important for previously existing scripts to ensure that files referenced in the script are still in the designated locations.*

To check a script:

1. In the Script Window, select the script.
2. Save the script, if not already saved.
3. From the *Script* menu, choose *Check*,
OR
On the toolbar, click  .
4. TCM verifies that files referenced in the script exist on available drives and lists an error message in the Errors found box for any missing files.
5. Choose the *OK* button to exit.

To build a script:

1. In the Script Window, select the script to be built.
2. From the *Script* menu, choose *Build*,
OR
On the toolbar, click  . The Configure Build window appears.



3. Select the item to build. If you select to build an application, specify the application.
4. Select ASCII format for your hex image, or Compression, which reduces the size of most hex images in order to speed downloading.
5. Click OK.
6. TCM performs a check. If the script has no errors, TCM proceeds with the build.

If the Build Fails

If the build fails, TCM displays a message indicating which file(s) are missing.

If the total amount of flash required by the script exceeds the image size, a TCM error results. To correct this, reduce the number of files in the volume, or make the disk non-bootable. Refer to [Defining Script Properties](#) on page 11-6 for more information on setting the image size appropriately.



Sending the Hex Image

Once the hex file is built, you are ready to download it to the terminal. A Hex image download requires both TCM and a program loader stored on the terminal. The terminal comes with a program loading utility, Initial Program Loader (IPL), stored in the terminal's write-protected flash. To run IPL, the terminal must be inserted in a cradle or connected to a development PC by direct serial connection.

Connect The Terminal and Development PC

To send the hex file to the terminal, first link the terminal and development PC by one of the following devices:

- Serial Charging Cable (p/n 25-55853-01)
- Single-Slot Serial Cradle (p/n CRD8000-1000S).

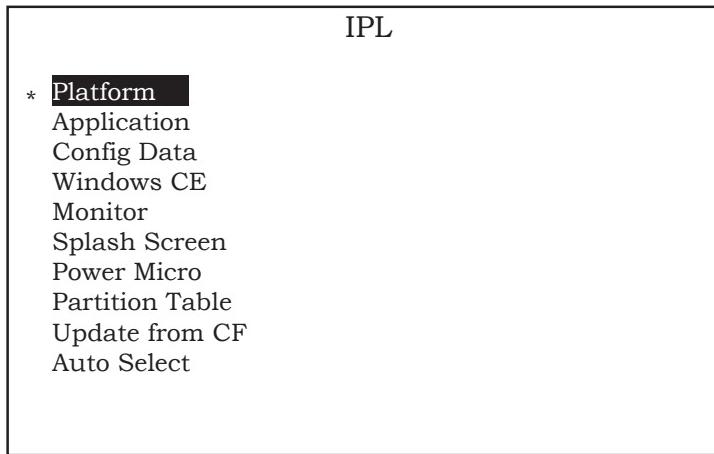
Set Up IPL to Receive the File

To set up IPL on the terminal to receive the files being downloaded via TCM:

1. Hard reset the terminal by removing the battery door and pressing the Power key and a Scan button, simultaneously.
2. Press the 5 key when three } appear on the bottom left of the screen.

Note: *Terminal display is in landscape mode in IPL. Therefore, rotate your terminal 90 degrees to the right to read the display correctly.*

3. IPL displays the Main Menu which lists the partitions/applications that can be downloaded.



4. Use the up and down scroll buttons to select the partition to be received, then press the Enter button.
 - a. *Auto Select* is the default, and will be selected if no other selection is made within 10 seconds.
 - b. If you select *Update from CF*, skip to step 8b.

Note: *If the platform application or data partition sizes are changed, you must download a new partition table first.*



5. IPL displays the *Select Transport* screen which lists the available methods of downloading the file.

Select Transport

* Serial - No Flow
Serial - RTS/CTS
Serial - Xon/Xoff
Previous
Top

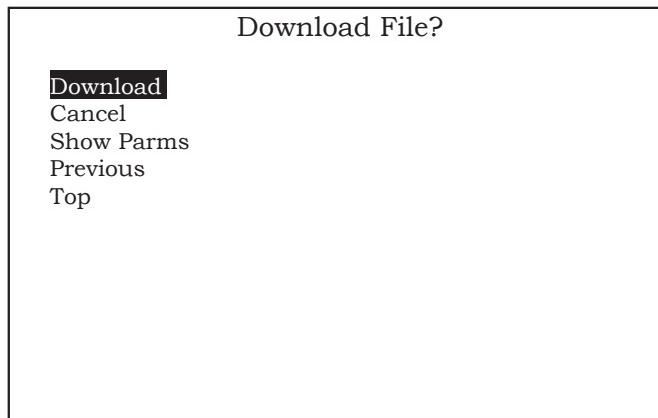
6. Use the up and down scroll buttons to select the method of transport, then press the Enter button.
7. IPL displays the *Select Baud Rate* screen which lists the available baud rates for the serial connection.

Select Baud Rate

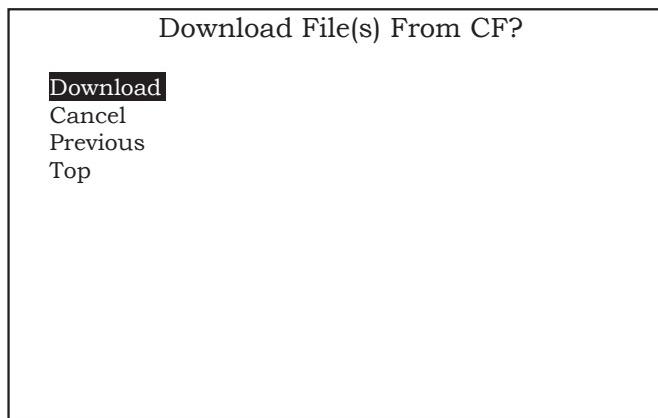
* 115200
57600
38400
19200
9600
Previous
Top

8. Use the up and down scroll buttons to select the appropriate baud rate, then press the Enter button.

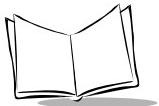
9. The following screen allows you to confirm your download. Use the up and down scroll buttons to make the appropriate selection, then press the Enter button.



- a. You can select *ShowParms* to view a summary of all the selections you have made in the previous steps.
- b. If you selected *Update from CF* in step 4, the following confirmation screen displays. Use the up and down scroll buttons to make the appropriate selection, then press the Enter button.



10. When the entire image is received, IPL indicates that the download is complete.
 - a. If you selected *Serial* in step 5, the terminal will indicate a “waiting for input” message. In TCM, select the desired file and press download. The download



status screen will then appear. When complete, press the Enter button to return to the main menu.

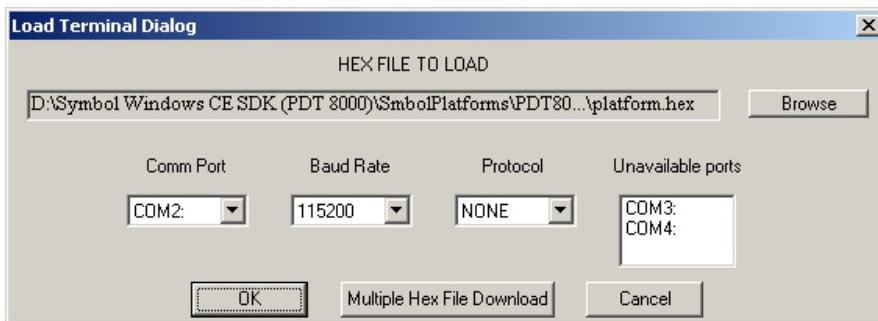
- b. If you selected *Auto Select* in step 4, the terminal will automatically return to the main menu once download is complete.
- c. If you selected *Monitor* in step 4, the terminal will reboot once download is complete.
11. When all partitions are downloaded successfully, hard reset the terminal by removing the battery door and pressing the Power key and a Scan button, simultaneously.

Begin the Send in TCM

In TCM on the host computer:

1. Select the script.
2. From the *File* menu, choose *Load Terminal*,
OR

On the toolbar, choose  . The *Load Terminal* screen displays.



3. If the correct hex file is not displayed in the *Hex File to Load* field, click on the *Browse* button and navigate to the correct hex file to be downloaded.
4. From the *Comm Port* drop-down menu, select the COM port being used. Ports already in use display in the *Unavailable Ports* field.
5. From the *Baud Rate* drop-down menu, select the appropriate baud rate. Your options are 2400, 4800, 9600, 19200, 38400, 57600, 115200.
6. From the *Protocol* drop-down menu, select *None*.

7. Click OK to load the file, or Multiple Hex File Download if more than one file is being loaded.

Error Messages

IPL Error Detection

While receiving data, IPL performs many checks on the data to ensure that the data is received correctly. If an error is detected, IPL immediately aborts the download, and reports the error on the terminal.

This screen displays until you press Enter. Once the screen is acknowledged, IPL returns to the Main Menu screen to wait for a new selection.

The cause of the error displays under the Download Failed! indication. The errors that can be reported, and the probable cause of the error, are as follows:

Error	Description
Download Cancelled	This error occurs when the user cancels the download.
Bad Checksum	This error occurs when the file is invalid or there is a communication error.
Bad Storage Checksum	This error occurs when the file is invalid or there is a communication error.
Not BIN File	This error occurs when the file is invalid.
Not SREC File	This error occurs when the file is invalid.
Record Short	This error occurs when the file is corrupt or invalid.
Not SYMHEX File	This error occurs when the file is invalid.
Bad HEX Record	This error occurs when the file is invalid.
Invalid HEX Data	This error occurs when the file is invalid.
Exceed Max Size	The size of the image is also part of the Header record. If the data to be written exceeds the size of the partition as indicated in the partition table, this error occurs.
Invalid/Wrong Partition	If a specific partition is selected from the partition list, and the destination code of the Header record downloaded does not match the index of that partition, this error occurs.



Error	Description
Invalid Image	This error occurs if another record is received before the Header Record. Ensure the Header Record is the first record downloaded.
Partition Not Defined	The destination code is part of the Header record and is used as an index into the partition table. The partition table entry located at this index contains partition information for the data downloaded. If the AutoSelect option is selected, a check is made to ensure that valid partition information exists in the partition table at this index. The check verifies that the Area Name and Sector Size are both non-zero. If not, this error occurs.
Incorrect Byte Count	Image data is processed until the End Of File (EOF - Record Type 01) record is received. This error occurs if IPL detects that the number of bytes received does not equal the number of bytes sent.
Unable to Verify Partition Data	If the Receive and Verify bit is set for that partition, the data is verified, the flash sector erased, and the data written to the flash part. If this data can not be verified, this error occurs.
Transmission Errors	<p>The following error messages may appear if an error occurs during transmission:</p> <ul style="list-style-type: none">• Checksum Error occurs if an invalid checksum is detected in the record.• Invalid Record occurs if a record is not defined in the Symbol Hex File Format.• Connection Lost occurs if one of the handshaking lines is de-asserted during download.• Address Out of Sequence occurs if the address of the data received is not sequential.

TCM Error Messages

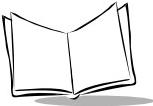
TCM validates the cells in your partition table when you select the Execute button. Cells highlighted in red contain an error. Partition loading is disabled until all errors are corrected. Following are errors that TCM may encounter, and possible solutions.

Error	Description
Error - Partition Size	The size of a partition must be an integral multiple of the FFSSectorSizeInBytes specified by the .ini file. When the user enters a partition size, TCM rounds up to the next highest integral multiple of the sector size and displays this value in the partition table grid. This error check is made upon value entry, independent of the Execute button.
Error - Image Larger than Partition	If the required size of the binary image file is larger than the associated partition size, the Partition Size cell in the partition grid turns red to highlight the error. The Required Size cell indicates the actual size required.
Error - Total size of all FFS Partition	If the total memory allocated to the 3 FFS partitions is greater than the total Flash Memory on the terminal, the Used FFS Memory display box turns red. Decrease the size of one or more of the partitions, then recheck the configuration using the Execute button.
Error - Source/ Destination Path Verification	If the directory paths specified by the Source and Destination cells do not exist, the cell containing the non-existent path turns red to highlight the error.

Creating and Loading a Splash Screen

To generate a custom splash screen, use a bitmap editor, such as Paintbrush.

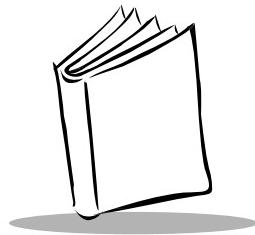
1. Create a 256-color bitmap with dimensions of BX x BY where:
 - BX is less than or equal to 240 pixels
 - BY is less than or equal to 320 pixels
2. Be sure to create the file with 256 colors. IPL will not load if the the file is not created correctly.
3. After designing the splash screen, rotate the bitmap 90 degrees clockwise.
4. Save the file as a 256-color bitmap.
5. Use TCM to convert the bitmap image file to a hex file (see [Building the Image](#) on page 11-10).



Loading the Splash Screen via TCM

To load the bitmap:

1. Click **TCM.exe** in the TCM directory.
2. Connect the terminal to the development PC and invoke IPL to prepare the terminal to receive the splash screen download.
3. Select *Load Terminal* from the *File* menu on the development PC.
4. Select your splash screen hex file to begin downloading to the terminal.
5. Close TCM.

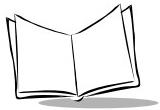


Chapter 12

Maintenance and Troubleshooting

Chapter Contents

Introduction	12-3
Maintaining the Terminal	12-3
Troubleshooting	12-4



PDT 8000 Series Product Reference Guide

Introduction

This chapter includes instructions on cleaning and storing your terminal, and provides troubleshooting solutions for potential problems during terminal operating.

Maintaining the Terminal

For trouble-free service, observe the following tips when using your terminal:

- Take care not to scratch the screen of your terminal. When working with your terminal, use the supplied stylus or plastic-tipped pens intended for use with a touch-sensitive screen. Never use an actual pen or pencil or other sharp object on the surface of the terminal screen.
- Although your terminal is water and dust resistant, do not expose it to rain or moisture for an extended period of time. In general, treat your terminal as you would a pocket calculator or other small electronic instrument.
- The touch-sensitive screen of your terminal contains glass. Take care not to drop your terminal or subject it to strong impact.
- Protect your terminal from temperature extremes. Do not leave it on the dashboard of a car on a hot day, and keep it away from heat sources.
- Do not store or use your terminal in any location that is extremely dusty, damp or wet.
- Use a soft lens cloth to clean your terminal. If the surface of the terminal screen becomes soiled, clean it with a soft cloth moistened with a diluted window-cleaning solution.



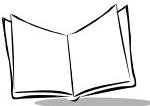
Troubleshooting

Table 12-1. Troubleshooting

Problem	Possible Solution
Terminal does not turn on.	Adjust the backlight. Ensure batteries are installed properly. If necessary, replace the batteries. Ensure the terminal is charged. If necessary, see Charging the Terminal Battery on page 1-8 for instructions to charge the terminal. If your terminal still does not operate, try a soft reset (see Resetting Your PDT 8000 Terminal on page 2-24).
Terminal turns itself off.	Your terminal is designed to turn itself off after a period of inactivity. This period can be set from one to five minutes, in one-minute intervals. Check the <i>Power</i> screen (in the <i>System</i> tab under <i>Start - Settings</i>), and change the setting if you need a longer delay before the automatic shutoff feature activates.
Terminal does not emit sound.	Check the System Volume slider in the <i>Sounds & Notifications</i> properties screen (under <i>Start - Settings</i>) to ensure the volume is not turned down.
Terminal stops responding to screen input.	Perform a soft reset. See Resetting Your PDT 8000 Terminal on page 2-24.
Terminal responds inaccurately to stylus taps.	Align the screen. Choose <i>Align Screen</i> from the <i>System</i> tab under <i>Start - Settings</i> or press Shift + 2 .
Terminal doesn't recognize my handwriting.	If you're using the Block Recognizer input method, characters must be written a certain way. See Appendix A, Block Recognizer Characters for information about how to write character strokes. Write the character strokes in the lower character entry area on the screen — not on the display part of the screen. Ensure you are writing lower-case letters, upper-case letters, and numbers in the appropriate sections of the writing area. See Entering Information Using the Input Panel on page 2-12.
Cannot see characters on display.	Ensure your terminal is on. See Starting the Terminal on page 1-21. Adjust the backlight on your terminal (see Adjusting the Backlight on page 2-3).

Table 12-1. Troubleshooting (continued)

Problem	Possible Solution
Tapping the screen buttons or icons does not activate the corresponding feature.	Align the screen. Choose <i>Screen</i> from the <i>System</i> tab under <i>Start - Settings</i> or press Shift + 2 .
Rechargeable lithium-ion battery did not charge.	Replace battery. If your terminal still does not operate, try a soft reset, then a hard reset (see <i>Resetting Your PDT 8000 Terminal</i> on page 2-24). Charge the terminal. See <i>Charging the Terminal Battery</i> on page 1-8 for instructions. Verify that the terminal is charging (see <i>Charge LED Indicator</i> on page 1-16). The lithium-ion battery requires up to fours hours to recharge fully
A message appears stating that your terminal memory is full.	Delete unused memos and records. If necessary, you can save these records on your host computer. If you are copying files to your terminal, adjust the memory allocation. Tap <i>Start - Settings</i> , and select the <i>System</i> tab. Tap <i>Memory</i> and adjust the slider. Remove programs you no longer use. Tap <i>Start - Settings</i> , and select the <i>System</i> tab. Tap <i>Remove Programs</i> , select the unused program and tap <i>Remove</i> .
Terminal is not communicating with the host computer.	Ensure your serial connection is setup correctly. Verify that the terminal and host computer are communicating at the same baud rate. Consult ActiveSync Help on your host computer.
During data communication, no data was transmitted, or transmitted data was incomplete.	Ensure your serial connection is setup correctly. See your System Administrator.

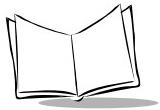
**Table 12-1. Troubleshooting (continued)**

Problem	Possible Solution
Terminal is not dialing out.	<p>The modem will not work if the terminal is actively connected to the host computer.</p> <p>Ensure the snap-on modem is connected to the terminal and the telephone jack or that the terminal is properly inserted into the modem cradle.</p> <p>If you are using the modem cradle, ensure <i>Hayes Compatible on COM1</i> is selected. If you are using the snap-on modem, ensure <i>Powered Serial on Com7</i> is selected.</p> <p>Tap <i>Start - Settings</i>, and select the <i>Connections</i> tab. Tap <i>Modem</i>, select your connection and tap <i>Next</i> twice. Ensure <i>Wait for dial tone before dialing</i> is selected.</p>
Terminal is dialing but not connecting.	<p>Ensure the network you are calling supports Point-to-Point Protocol (PPP). Ask your networking administrator.</p> <p>Ensure the location is correct. Tap <i>Start - Settings</i>, and select the <i>Connections</i> tab. Tap <i>Modem</i>. On the <i>Dialing</i> tab, check <i>Location</i>. Tap <i>Dialing Patterns</i> to ensure the correct numbers are being dialed.</p> <p>Verify you are dialing the right number. Tap <i>Start - Settings</i>, and select the <i>Connections</i> tab. Tap <i>Modem</i>. Tap the connection, then <i>Next</i> and check the phone number.</p> <p>Disable call waiting. Tap <i>Start - Settings</i>, and select the <i>Connections</i> tab. Tap <i>Modem</i>. On the <i>Dialing</i> tab, select <i>Disable call waiting</i>, and enter the disable code obtained from your telephone company.</p>
Beamed data does not transmit.	<p>Confirm that the terminals are 5 inches apart, and that the path between the two devices is clear of obstacles.</p> <p>Adjust the room lighting or move to a different location.</p>
When receiving beamed data an out of memory message appears.	Your terminal requires at least twice the amount of memory available as the data you are receiving. For example, if you are receiving a 30K application, you must have at least 60K free.

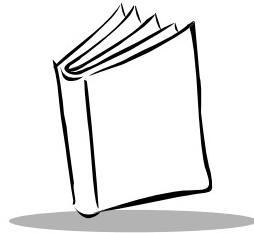
Table 12-1. Troubleshooting (continued)

Problem	Possible Solution
Terminal does not accept scan input.	<p>Verify that the terminal is loaded with a scanning application. See your System Administrator.</p> <p>Ensure the bar code symbol is not defaced.</p> <p>Ensure you are within proper scanning range.</p> <p>Check the path to ensure no objects are in the way.</p> <p>Ensure the terminal is programmed to accept the type of bar code you are scanning.</p> <p>Ensure your exit window is clean.</p> <p>If you are expecting a beep on a good decode and don't hear one, check that the application is set to generate a beep on good decode.</p> <p>If the terminal stops emitting a laser beam when you press the trigger, check your battery level. When the battery is low, the scanner shuts off before the terminal notifies you of the very low battery condition.</p>
Fail to communicate with IrDA printer.	<p>Bring the terminal closer to the printer and attempt communications again.</p> <p>Check the path to ensure no objects were in the way.</p> <p>Printer support must be included with the application to run IrDA printing on the terminal. See your System Administrator.</p>

Note: If, after performing these checks, the terminal is still not reading symbols, contact your distributor or Symbol Technologies.



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Appendix A

Block Recognizer Characters

Using the Block Recognizer, you can write characters directly on your terminal screen with your stylus. These characters are translated into typed text. Use Block Recognizer to enter text, for example, to write a note or to fill in fields in a dialog box.

[Figure A-2](#) provides examples of how to write characters in lowercase. The Block Recognizer input panel is divided into two writing areas. Letters written in the left area (labeled abc) create lowercase letters. Use the right area (labeled 123) for writing numbers, symbols, special characters, and punctuation.

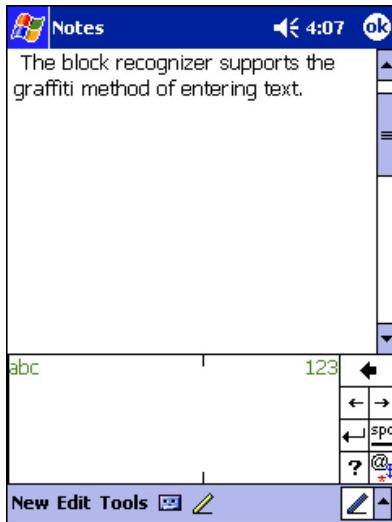
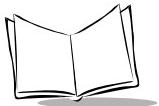


Figure A-1. Using Block Recognizer



The following chart illustrates some of the characters you can write (the dot on each character is the starting point for writing).

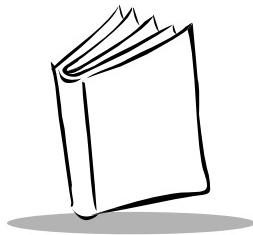
Letter Area		Number/Punctuation Area	
A	a	N	h
B	b	O	00
C	C	P	p
D	d	Q	q,q
E	e	R	r,r
F	f	S	s
G	g	T	t,7,7,7,7
H	h	U	u,u
I	i	V	v
J	j	W	w,w
K	k	X	x,x,x
L	l	Y	y,y,y
M	m	Z	z
		0	0
		1	↑
		2	2
		3	3
		4	4 4 4 4 L
		5	5 5 5 5
		6	6
		7	7
		8	8
		9	9
		>	>
		•	•
		((
))
		+	++
		*	*X*
		/	/
		\	\
		?	?
		!	!
		@	@
		&	&
		‘	‘
		“	“
		-	-

space	←
back space	→

enter	↓
back space	→

Figure A-2. Character Chart

For specific instructions on using Block Recognizer, with Block Recognizer open, tap the question mark next to the writing area.



Appendix B

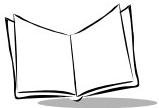
Demo Program

Introduction

The PDT 8000's demo program illustrates how to use some of the terminal's many applications. If the demo program is not already on your terminal (check the *Start* menu), you may download the program from the *Symbol Windows CE Software Developer's Kit (SDK)*. See [Chapter 3, Customizing Your Terminal](#) for instructions on adding programs to your terminal.

The following options are available via the demo program, and are described in this chapter.

- Utilities accesses the Control Panel and Diagnostics.
- Sample scanning applications for Visual C/C++, Visual Basic, and Pocket Internet Explorer.
- File Explorer file management utility.
- CE Apps accesses standard Microsoft Windows CE applications.
- Audio sample application demonstrates how to record, play back, and save audio files.
- ImageViewer application illustrates how to manipulate displayed image files.



To initiate the demo program, tap *Start - PDT 8000 Demo*. The initial demo program screen appears.



Figure B-1. Main Demo Screen

Scan Demo (VC Scan)

The Visual C/C++ sample scanning application enables the terminal's scanner, allows the user to change scan parameters, and displays scanned data. To access the demo, tap **VC Scan** on the main demo screen.

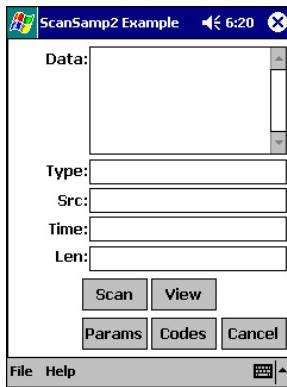


Figure B-2. Scan Sample Screen

Scanning Data Fields

After a bar code is scanned, the following data appears in the screen:

- *Data* displays the data encoded in the scanned bar code.
- *Type* indicates the hex type scanned.
- *SRC* indicates the scanner being used, and the bar code type scanned (e.g., Code 128).
- *Time* displays the time the bar code was scanned.
- *Len* indicates the number of digits in the bar code.

Scanning Options

The following options are available in the *Scan* screen:

- *Scan* provides an alternative to the trigger buttons on the terminal.
- *View* displays the bar code content in a separate screen.
- *Params* is used to change scanning parameter options, such as:
 - beep time (length of decode beep)
 - beeper frequency (tone)
 - LED-on time (length of time LED remains on upon decode)
 - Code ID (AIM, Symbol)
 - Wav File (sound of decode beep).
- *Codes* selects the code types the terminal is able to decode, and sets the options for each code type.
- *Cancel* closes the *Scan* screen.



ActiveX Demo (VB Scan)

The ActiveX scan test uses the ActiveX Scan Control to perform bar code scanning. Upon a successful decode, the decoded data and bar code type are displayed.

To access the demo, tap VB Scan on the main demo screen.

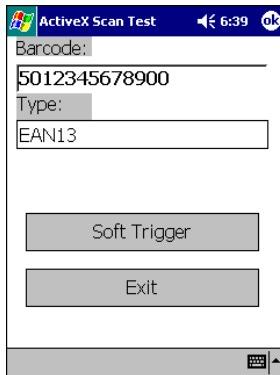


Figure B-3. ActiveX Scan Test Sample Screen

HTML Scan Demo

The HTML Scan demo provides the HTML application ScanBrowse. You may also use this application to turn the Scan Wedge in ScanBrowse on and off.

To access the demo, tap HTML Scan on the main demo screen.

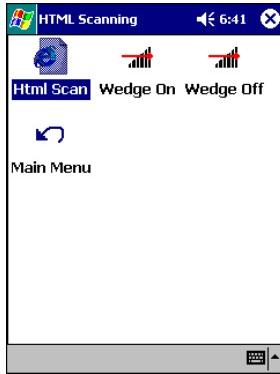


Figure B-4. HTML Scan Demo Screen

Wedge On/Off

These icons enable and disable the Scan Wedge. When enabled, the taskbar icon for the Scan Wedge appears in the task tray, and allows data to be scanned into edit fields.

Note: *The Pocket PC Task Tray is only visible on the Today screen.*

ScanBrowse

ScanBrowse uses Pocket Internet Explorer to render the HTML code and the Scan Wedge to scan data into scan enabled fields.

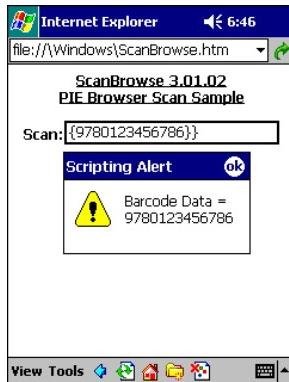
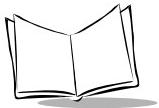


Figure B-5. Scan Browse Screen

In this sample HTML application, the scan wedge is configured (via ScanWedge.reg) to bracket all scanned data with “{“ and “}” to allow the HTML application to differentiate scanned data from keyboard-entered data.



Files

Tap **Files** on the main demo screen for a file browser utility, File Explorer, that provides similar Windows Explorer-like functionality on Pocket PC terminals. File Explorer allows the user to browse, cut, copy, paste, and delete files as well as execute the program. It also provides file transfer capability via the IrDA port.

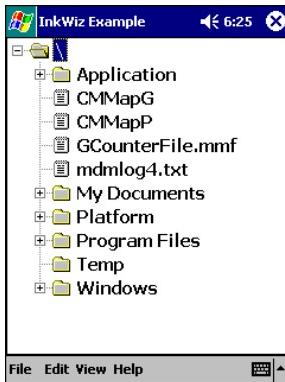


Figure B-6. File Explorer Screen

You can also access Microsoft File Explorer by tapping *Start - Programs*.

Sounds (Audio Sample)

Tap Sounds on the main demo screen for an audio sample, which demonstrates how to record, play back, and save sounds.



Figure B-7. Audio Sample Screen

Audio Files are opened from and saved to \Application\wav\ by default, and are configured by the following registry key:

HLCU\software\Symbol\settings

"WavDirectory" = "\Application\wav"



Images (ImageViewer Sample)

Tap **Images** on the main demo screen for an ImageViewer sample, which demonstrates how to manipulate displayed image files.

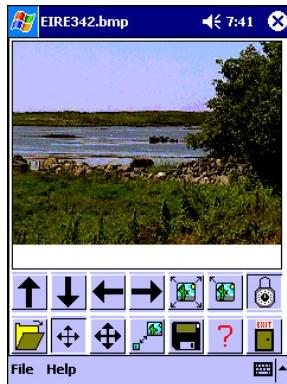


Figure B-8. ImageViewer Screen

ImageViewer uses the SymDjpeg.dll (supplied with source code in the SDK) to convert the images between file formats. ImageViewer supports the following image formats:

- color .bmp
- monochrome .jpg

CE Apps

Tap CE Apps on the main menu to access the following standard Windows CE applications:

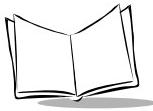
- Note Taker
- Calculator
- Tasks
- Calendar
- Solitaire.



Figure B-9. CE Apps Screen

About

Select the About button on the demo's main screen to view information about the demo program.



Utilities

Tap Utilities on the main demo screen for diagnostic options that ensure various aspects of the terminal are functioning correctly.

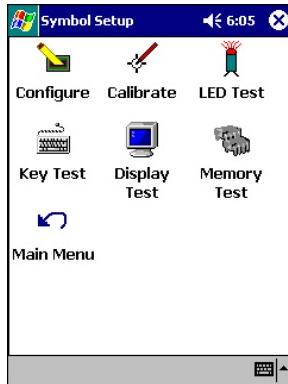


Figure B-10. Utilities Screen

- *Configure* accesses the Control Panel screen. See [Control Panel](#) on page -11.
- *Calibrate* allows you to re-calibrate the screen.
- *LED Test* tests the green decode LED-on and LED cycle to ensure it is functioning properly. This option also allows you to view the state of the LED (on or off).
- *Key Test* identifies each button on the terminal (except the Scan buttons) when each button is pressed.
- *Display Test* tests the pixels on the screen.
- *Memory Test* demonstrates how to query available memory, calculate memory load (%), and how to write code that properly handles system hibernate messages.
- *Main Menu* returns to the demo's main screen.

Control Panel

Tap **Configure** on the Utilities screen to access the Control Panel, where you can specify settings for your terminal.

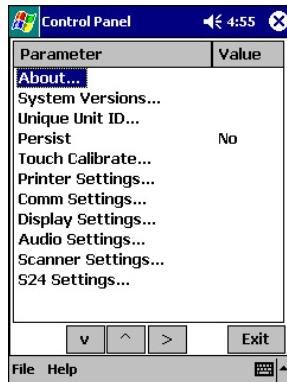


Figure B-11. Control Panel Screen

About and System Versions

Tap **About** on the Control Panel to view the version of the Control Panel. Tap **System Versions** to view version information for the applications on your terminal.

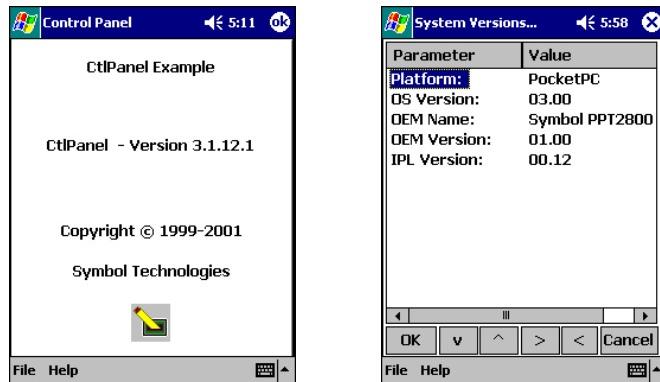
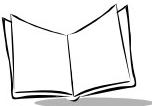


Figure B-12. About and System Versions Screen

On the System Versions screen:

- *Platform* indicates the operating system running on your terminal (Pocket PC).
- *OS Version* specifies the version of the operating system.



- *OEM Name* is the OEM name of the terminal.
- *OEM Version* indicates the build version of the operating system.
- *IPL Version* identifies the build version of the system loader.

Unique Unit ID

Tap *Unique Unit ID* on the Control Panel to view the terminal's unique unit ID (a 16-byte hex number identifier), and the version numbers for RCM (Resource Coordinator Manager) API, Rescoord (Resource Coordinator) DLL, UUID DLL, and Temperature DLL.

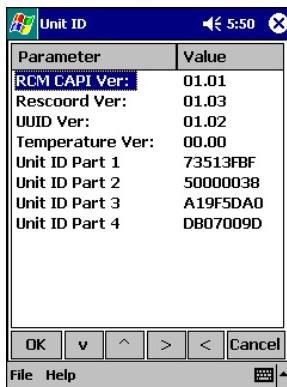


Figure B-13. Unique Unit ID Screen

Note: PDT 8000 Terminals do not support the Temperature DLL.

Persist

Persist allows changes made by the Control Panel to remain in effect after a hard reset. When enabled, Persist creates .reg files which save specific settings that are made and restore the settings to the registry after a hard reset.

Toggle *Persist* to Yes to retain these changes made after a hard reset.

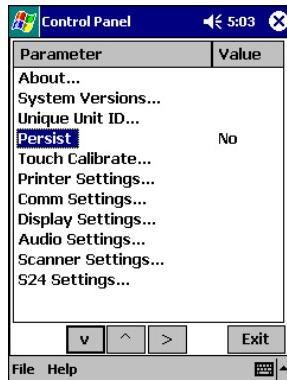


Figure B-14. Persist

Note: Not all options support Permanent Persistence.



Touch Calibrate

Select *Touch Calibrate* to re-align the screen.

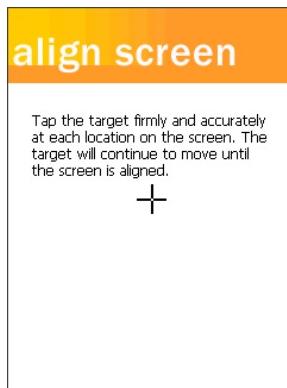


Figure B-15. Align Screen

Printer Settings

Select *Printer Settings* on the Control Panel to select the printer you'll use with the terminal, and specify printer settings.



Figure B-16. Printer Settings Screen

- *Selected Printer* allows you to select the printer to use. To change the printer, tap the *Selected Printer* field to scroll through the available printers.

- *Printer Parameter* allows you to set the communication parameter associated with the selected printer. To change this setting, tap the *Printer Parameter* field, then select the communication parameter for your printer.
- *Version Info* displays the Printer API version number.

Communication Settings

Select *Comm Settings* on the Control Panel to specify the settings to use when communicating with other devices.

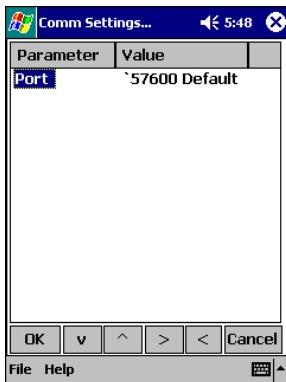
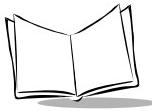


Figure B-17. Communication Settings Screen

Tap *Port* to select the appropriate communication settings to be used by ActiveSync. Scroll through the communication settings to select the appropriate value.



Display Settings

Select *Display Settings* on the Control Panel to customize the display contrast and backlight.

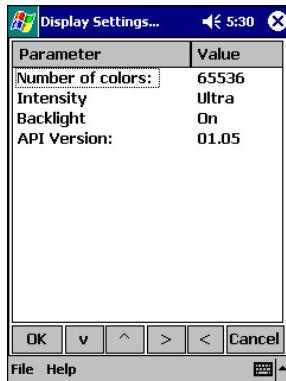


Figure B-18. Display Settings Screen

- Tap *Intensity* to increment the intensity value. The terminal's display changes along with the value.
- Tap *Backlight* to toggle the backlight on or off.
- *API Version* displays the current version of the Display API.

Audio Settings

Select *Audio Settings* on the Control Panel to specify the beeper volume and view the version numbers for the Audio and Notify APIs.

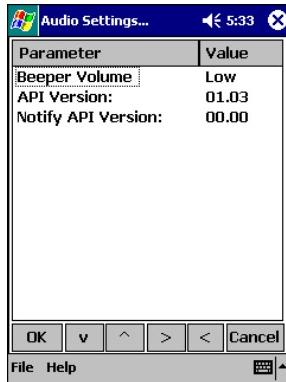


Figure B-19. Audio Settings Screen

- Tap *Beeper Volume* to toggle the beeper volume between low, medium, and high. As you change the value, the beeper sounds to demonstrate the level.
- *API Version* displays the version number of the Audio API.
- *Notify API Version* displays the version number of the Notify API.

Scanner Settings

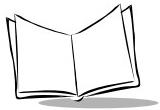
Select *Scanner Settings* on the Control Panel to specify scanner-related parameters.



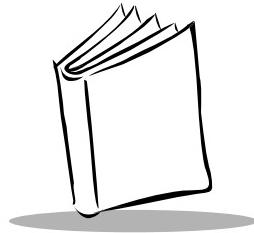
Figure B-20. Scanner Settings Screen

Tap *Scanner Version* to view the version numbers for the hardware, decoder, PPD, MDD, and API.

Refer to the Help file on the SDK for details on the available parameter options.



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Appendix C

Technical Specifications

Environment

The following table summarizes the terminal's intended operating environment.

Operating Temperature	0° C to 50° C (32° F to 122° F)
Storage Temperature	-25° C to 70° C (-13° F to 158° F)
Humidity	5% to 95% non-condensing
Electrostatic Discharge (ESD)	15 kVdc air; 8 kVdc contact
Drop to Concrete	1.2 meters (4 feet)
Sealing	IP54 (dust category 2)
Size	184mm x 91mm x 50mm (7.26”L x 3.57”W x 1.97”H)
Weight (including battery)	595gm (21.0 oz)



COM Port Definitions

COM Port	Definition
COM1	Serial/Cradle
COM2	PCMCIA/CF Serial
COM3	IRCOMM
COM4	IRDA
COM5	Reserved
COM6	Reserved
COM7	Powered Serial Cable
COM8	Reserved
COM9	Reserved

Pin-Outs

The ActiveSync Port shown below represents the port on the bottom of the terminal.

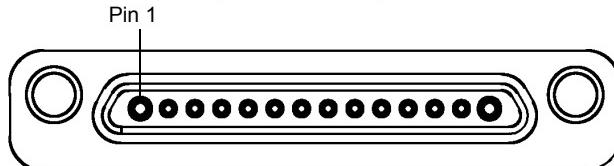
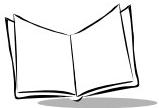


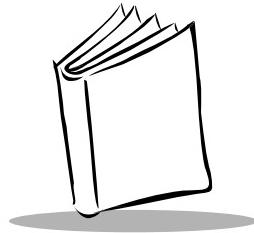
Figure C-1. ActiveSync Port (COM1)

Table C-1. ActiveSync Port (COM1) Pin-Outs

Pin	Description
1	GND
2	ext ±5 volts
3	DSR
4	RXD
5	RTS
6	TXD
7	CTS
8	DCD
9	RI
10	DTR
11	NC
12	NC
13	NC
14	VCHG



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Appendix D

Keyboard Maps

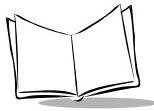
Introduction

This appendix contains the keyboard map for the keyboard configuration of the terminal. Each key is listed in the table with its value, depending on the state of the keyboard.

As shown below, when the **1** key is pressed on the keyboard, the default state displays the number '1'. After pressing the Shift key, the press of the '1' key acts as a Clear button.

Key	Default State	Shift State	VK Code (Decimal)	ASCII Value (Decimal)
1	1		49	49
		Clear	46	

In addition to key values, VK codes and ASCII values are listed for each key, where applicable.



Keyboard

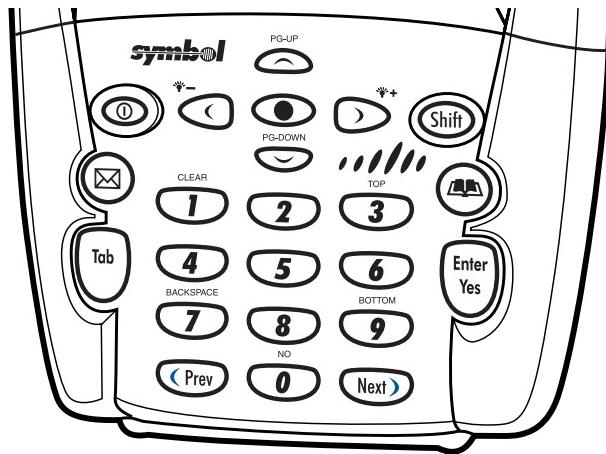


Figure D-1. Terminal Keyboard

Table D-1. Keyboard Functionality

Key	Default State	Shift State	VK Code (Decimal)	ASCII Value (Decimal)
Up arrow			38	
		Page up	33	
Power				
Left Arrow			37	

Table D-1. Keyboard Functionality (Continued)

Key	Default State	Shift State	VK Code (Decimal)	ASCII Value (Decimal)
		Decrease Backlight		
	App Key 1		App 1	
		VK_F13	124	
	Right Arrow		39	
		Increase Backlight		
	To Shift			
	Down Arrow		40	
		Page down	34	
	App Key 2		App2	
		toggle backlight		
	App Key 3		App3	

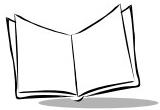


Table D-1. Keyboard Functionality (Continued)

Key	Default State	Shift State	VK Code (Decimal)	ASCII Value (Decimal)
		toggle backlight		
1	1		49	49
		Clear	46	
2	2		50	50
		Calibration Screen		
3	3		51	51
		Top	36	
4	4		52	52
		VK_F4	115	
5	5		53	53
		VK_F5	116	
6	6		54	54

Table D-1. Keyboard Functionality (Continued)

Key	Default State	Shift State	VK Code (Decimal)	ASCII Value (Decimal)
		VK_F6	117	
7	7		55	55
		Backspace	08	08
8	8		56	56
		VK_F8	119	
9	9		57	57
		Bottom	35	
Prev	VK_F14		125	
		VK_F11	122	
0	0		48	48
		No	27	27
Next	VK_F15		126	
		VK_F12	123	

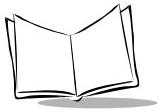
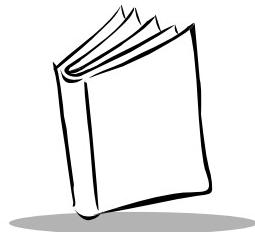


Table D-1. Keyboard Functionality (Continued)

Key	Default State	Shift State	VK Code (Decimal)	ASCII Value (Decimal)
 Tab	Tab		09	09
		VK_F10	121	
 Enter Yes	Enter		13	13



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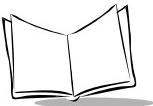
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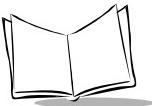
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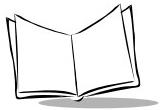
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